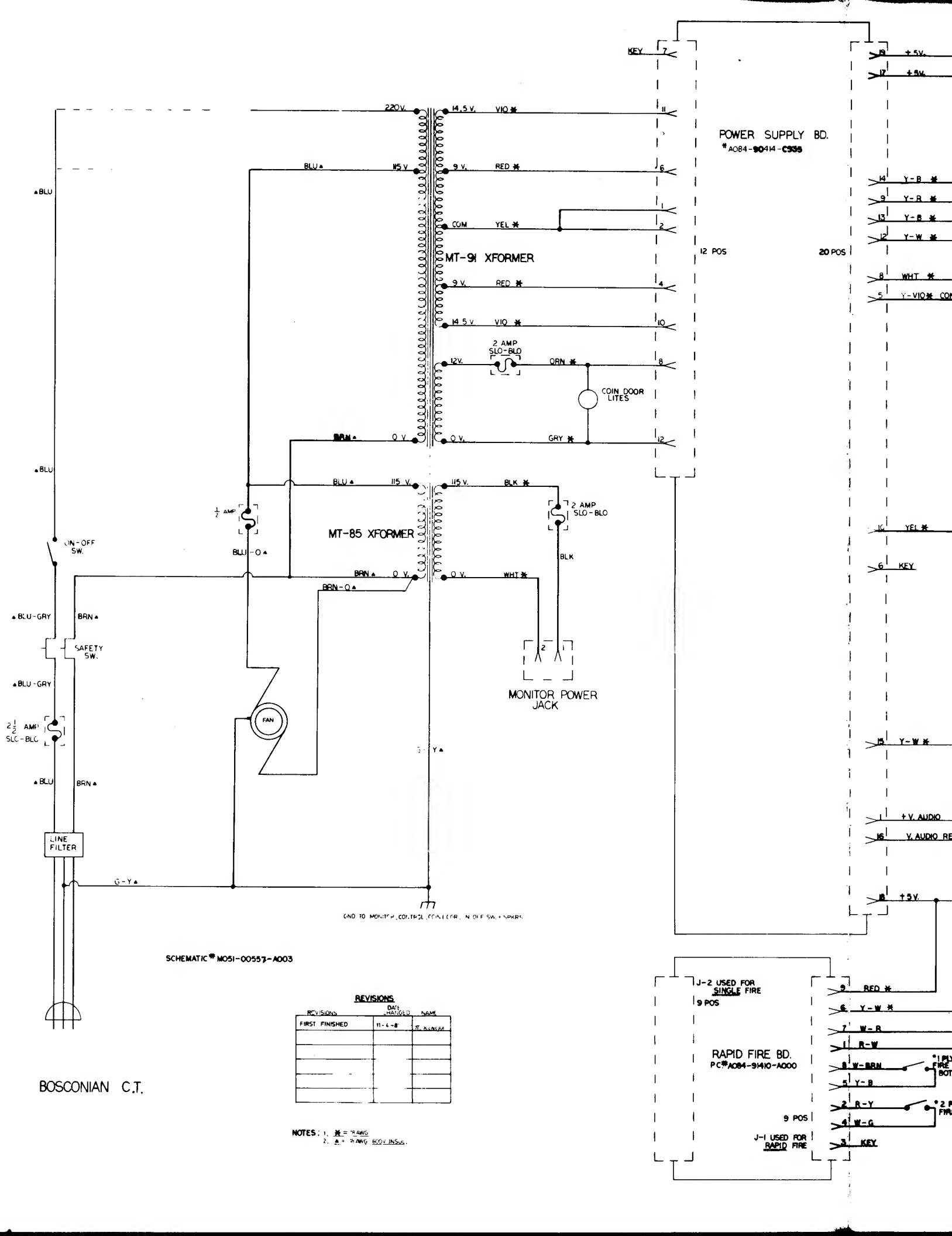


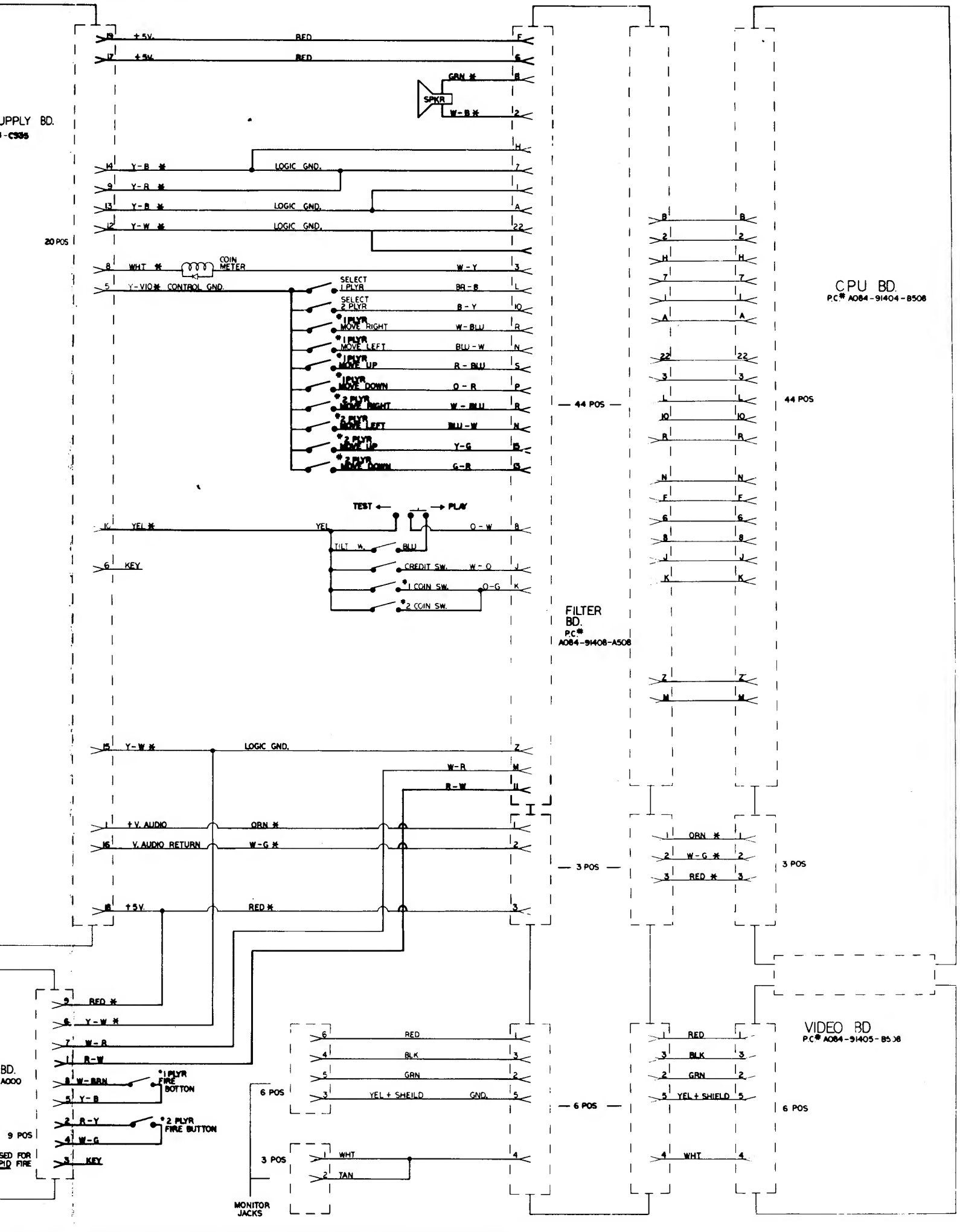
SCHEMATIC * M051-00557-A003

REVISIONS

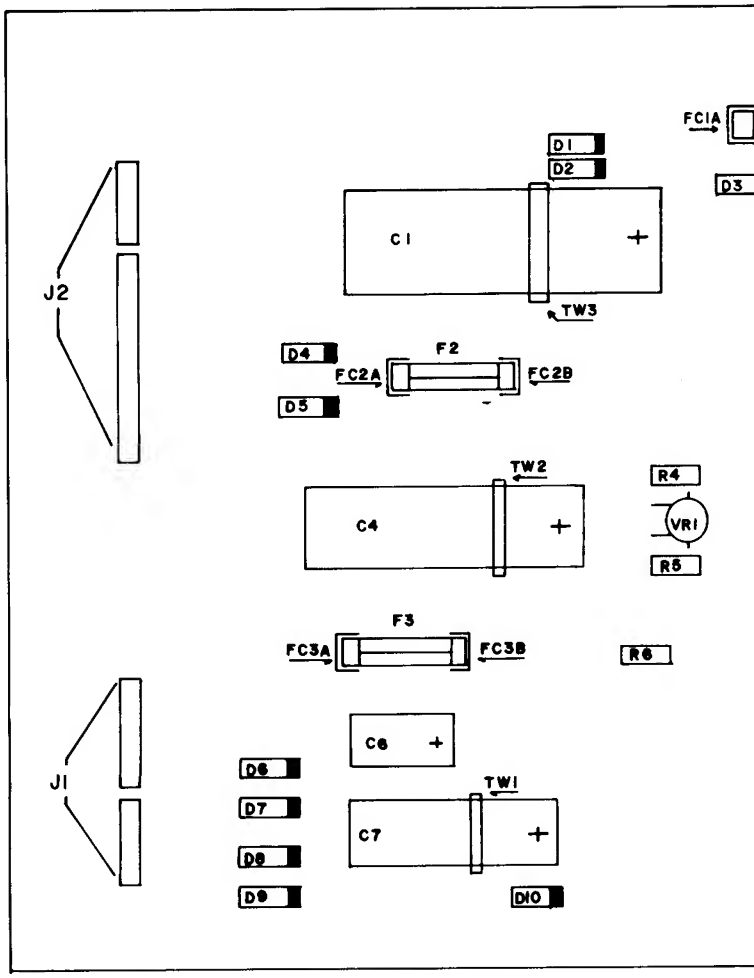
REVISIONS	DATE CHANGED	NAME
FIRST FINISHED	11-4-8	

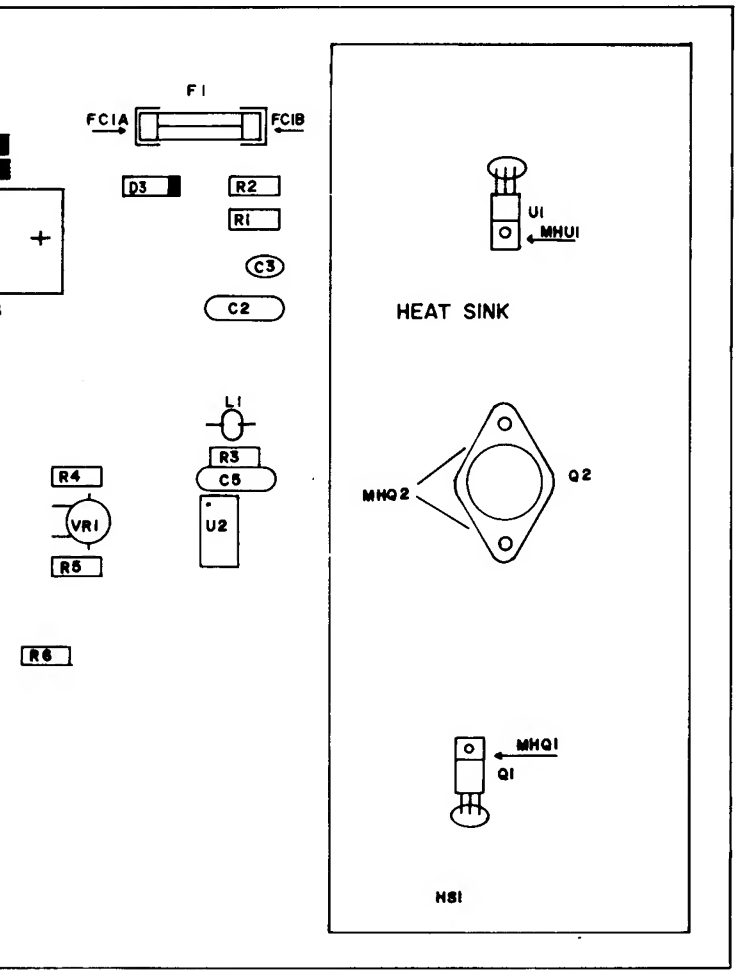
NOTES: 1. * = 18 AWG
2. ▲ = 18 AWG 600V. INSUL.

BOSCONIAN C.T.


+5V.
RED
GRN *
SPKR
W-B *
Y-B *
LOGIC GND.
Y-R *
Y-W *
20 POS
WHT *
COIN METER
W-Y
Y-VIO * CONTROL GND.
SELECT 1 PLYR
BR-B
SELECT 2 PLYR
B-Y
* 1 PLYR MOVE RIGHT
W-BLU
* 1 PLYR MOVE LEFT
BLU-W
* 1 PLYR MOVE UP
R-BLU
* 1 PLYR MOVE DOWN
O-R
* 2 PLYR MOVE RIGHT
W-BLU
* 2 PLYR MOVE LEFT
BLU-W
* 2 PLYR MOVE UP
Y-G
* 2 PLYR MOVE DOWN
G-R
TEST
PLAY
YEL *
YEL
O-W
TILT W.
BLU
KEY
CREDIT SW.
W-O
* 1 COIN SW.
O-G
* 2 COIN SW.
44 POS
CPU BD.
P.C.* A084-91404-B508
FILTER BD.
P.C.*
A084-91408-A508
Y-W *
W-R
R-W
+V. AUDIO
ORN *
V. AUDIO RETURN
W-G *
+5V.
RED *
3 POS
RED *
Y-W *
W-R
R-W
W-BRN
* 1 PLYR FIRE BOTTON
Y-B
R-Y
* 2 PLYR FIRE BUTTON
W-G
KEY
9 POS
6 POS
BLK
GRN
YEL + SHEILD
GND.
VIDEO BD
P.C.* A084-91405-B508
3 POS
WHT
TAN
MONITOR JACKS

DESIGNATION	DESCRIPTION
C1	10000 MF 35V AX. ELEC.
C2	.01 MF 50V AX.CER.
C3	1MF 25V TANT.
C4	20000 MF 16V AX. ELEC.
C5	100 PF 50V AX.CER
C6	470 MF 16V AX. ELEC.
C7	4700 MF 25V " "
R1	470 OHM 1/4W 5% CRBN
R2	100 " " " "
R3	2.7K " " " "
R4	560 " " " "
R5	510 " " " "
R6	10 " " " "
VR1	100 OHM 1/4W CRBN. FLM.
D1, D2	A14F
D3	IN4004
D4, D5	MR750
D6-D9	A15F
D10	A14F
Q1	TIP31
Q2	2N3055
U1	LM317
U2	3532
L1	FERROXCUBE BEAD
HS1	HEAT SINK
F1	FUSE 2A
F2	" 8A
F3	" 8A
FC1A, FC1B, FC2A	FUSECLIP W/ STOP
FC2B, FC3A, FC3B	" "
J1	CONN. KK.156 (RA)(5-PIN)(6-PIN)
J2	" " (RA)(5-PIN)(13-PIN)
MHQ1	MOUNTING HARDWARE Q1
	(1) SCREW 4-40X10 SLT RND
	(1) WSH.4 120-.250-018
	(1) HEXNUT 4-40
	(1) SHOULDER WSH. 974-302
	THERMAL COMPOUD AS REQ.
	(1) TO-220 INSULATOR RT-3.5 MICA
MHQ2	MOUNTING HARDWARE Q2
	(2) SCREW 4-40X10 SLT RND
	(2) WSH 4 120- 250-018
	(2) HEXNUT 4-40
	(2) SHOULDER WSH. 974-302
	THERMAL COMPOUD AS REQ.
	(1) TO-3 RT-1.5 FILM
MHU1	MOUNTING HARDWARE U1
	(1) SCREW 4-40X10 SLT RND
	(1) WSH 4 120-.250-018
	(1) HEXNUT 4-40
	(1) SHOULDER WSH. 974-302
	THERMAL COMPOUD AS REQ
	(1) TO-220 INSULATOR RT-3.5 MICA
TW1-TW3	TIE WRAPS





DESCRIPTION	QTY	DESIGNATION	PART NUMBER
100 PF 50v AX.CER.	1	C5	**0508-00800-2100**
.01MF " " "	1	C2	0171-097H2-JXXX
1MF 25v TANT.	1	C3	0935-00814-0100
470MF " AX.ELEC.	1	C6	0175-271EX-EXXX
4700MF " " "	1	C7	**0508-00800-2200**
10000MF 35v AX.ELEC.	1	C1	0175-322GX-EXBX
20000 16v MF " "	1	C4	0935-00814-0800
10 OHM 1/4w 5% CBN	1	R6	0062-051B3-1XXX
100 " " " "	1	R2	0062-110B3-1XXX
470 " " " "	1	R1	0062-156B3-1XXX
510 " " " "	1	R5	0062-159B3-1XXX
560 " " " "	1	R4	0062-162B3-1XXX
2.7K " " " "	1	R3	0062-199B3-1XXX
100 " " CBN FLM	1	VR1	0063-025AX-1DEX
1N4004	1	D3	0508-00801-0200
A14F	3	D1,D2,D10	0064-168XX-XXGX
A15F	4	D6-D9	0064-169XX-XXGX
MR750	2	D4,D5	0064-303XX-XXJX
TIP31	1	Q1	0065-485XX-XXXX
2N3055	1	Q2	0935-00800-0000
3532	1	U2	0066-044BX-XXXX
LM317	1	U1	0935-00804-3600
FERROXCUBE BEAD	1	L1	0017-00009-0225
HEAT SINK	1	HS1	0068-045XX-ABDX
FUSE 2A	1	F1	0017-00003-0005
FUSE 6A	1	F3	0017-00003-0008
FUSE 8A	1	F2	0017-00003-0184
FUSECLIP	6	FC1A,FC1B,FC2A, FC2B,FC3A,FC3B	0017-00003-0214
KK 156 (RA) (5)	2	J1,J2	3000-16387-0500
KK 156 (RA) (6)	1	J1	3000-16387-0600
KK 156 (RA) (13)	1	J2	3000-16387-1300
SCREW 4-40x10	4	MHU1,MHQ1,MHQ2	0017-00101-0727
WSH 4 120-.250-018	4	" " "	0017-00104-0071
HEXNUT 4-40	4	" " "	0017-00103-0002
SHOULDER WSH	4	" " "	0017-00042-0109
THERMAL COMPOUND	AS REQ.	" " "	0017-00009-0204
TO-220 INSULATOR	2	MHU1,MHQ1	0017-00003-0205
TO-3 INSULATOR	1	MHQ2	0017-00042-0108
TIE WRAPS	3	TW1-TW3	0017-00042-0105
PCB	1	———	**A080-90414-C935**

DIM TOLERANCES UNLESS OTHERWISE SPEC
CONCENTRICITY T I R .002
FRACTIONAL ± 1/64
DECIMAL ± .005
HOLE DIA + .002 - .000
ANGLE ± 1/2°
DO NOT SCALE DWG

FIRST USE ON: RALLY-X
DRN: MAM
DATE: 2/9/82
SCALE:
MECH CHK:
MAT'L:
ENG CHK: Y.S.
FINISH:

MIDWAY MFG. CO.
FRANKLIN PK., IL. 60131 A BALLY CO

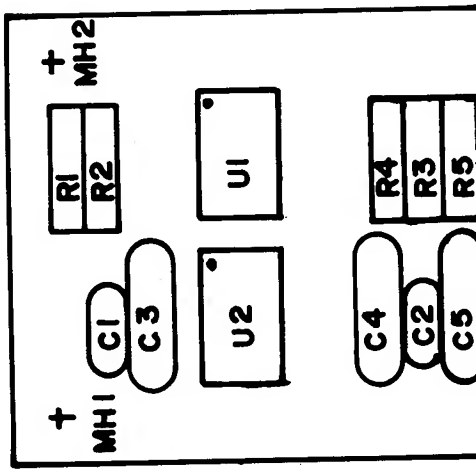
ASSEMBLY DRWNG
PWR. SUPP.
A084-90414-C935

REVISIONS

PART NO
M051-00935-C028

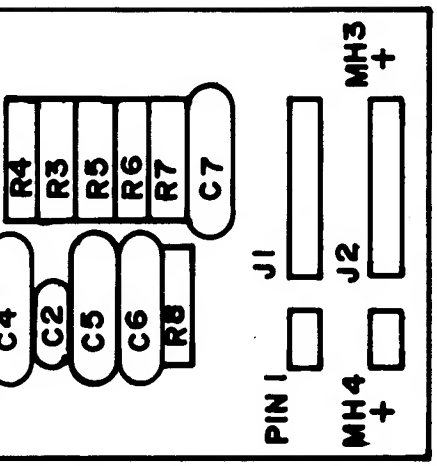
DESIGNATION LIST

DESIGNATION	DESCRIPTION
C1, C2	.1MF 100V MYLAR
C3-C7	.01MF 25V AX CER
R1-R4	1MEG OHM 1/4w 5% CRBN RES
R5	1K " " " " "
R6	68 " " " " "
R7	1K " " " " "
R8	68 " " " " "
U1	LM556
U2	7400
J1, J2	KK.156 VERT 2(6-PIN) 2(2-PIN)
MH1-MH4	SNAP BUSHING 1/4"



PROJECT ENG: JERRY SZERSZ

DIM. TOLERANCES UNLESS OTHERWISE SPEC	
CONCENTRICITY T I R	002
FRACTIONAL	± 1/64
DECIMAL	± 005
HOLE DIA	+ 002 -- 000
ANGLE	± 1/2°
DO NOT SCALE DWG	



CROSS REFERENCE LIST

DESCRIPTION	QUANTITY	DESIGNATION	PART #
.01MF 25VAXCER	5	C3-C7	0508-00800-0800
.1MF 100V 10% MYLAR	2	C1, C2	0508-00800-2300
68 OHM 1/4w 5% CRBN RES.	2	R6,R8	0062-09883-1XXX
1K " " " " "	2	R5,R7	0062-17983-1XXX
1MEG " " " " "	4	R1-R4	0062-32383-1XXX
LM556	1	U1	0508-00803-5500
7400	1	U2	0508-00803-5600
KK.156 CON. (2-PIN)	2	J1,J2	3000-16335-0200
(6-PIN)	2	J1,J2	3000-16335-0600
MOUNTING HARDWARD SNAP BUSHING 1/4"	4	MH1-MH4	0017-00042-0014
RAPID FIRE P.C	1	A080-91410-A000	A080-91410-A000

ERSZEN

GALAGA

DATE 09-30-81

SCALE FULL

MATL

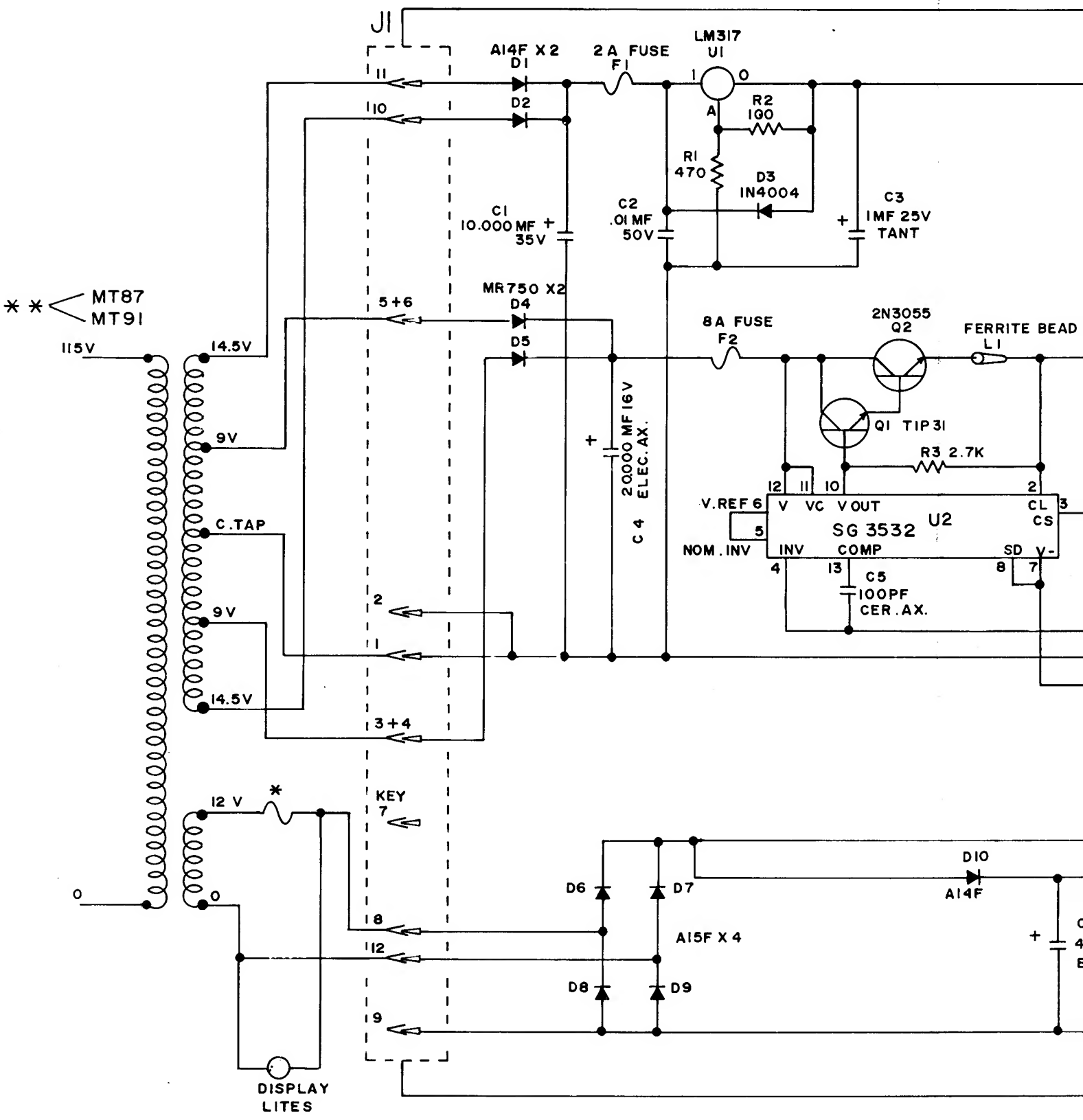
FINISH

MIDWAY MFG. CO.
FRANKLIN PK., IL. 60131 A BALLY CO.

RAPID FIRE P.C.
ASSEMBLY DRAWING
A082-91410-A000

REVISIONS

PART NO
M·0·5·1 -0·0·1·1·4 -A·0·0·1

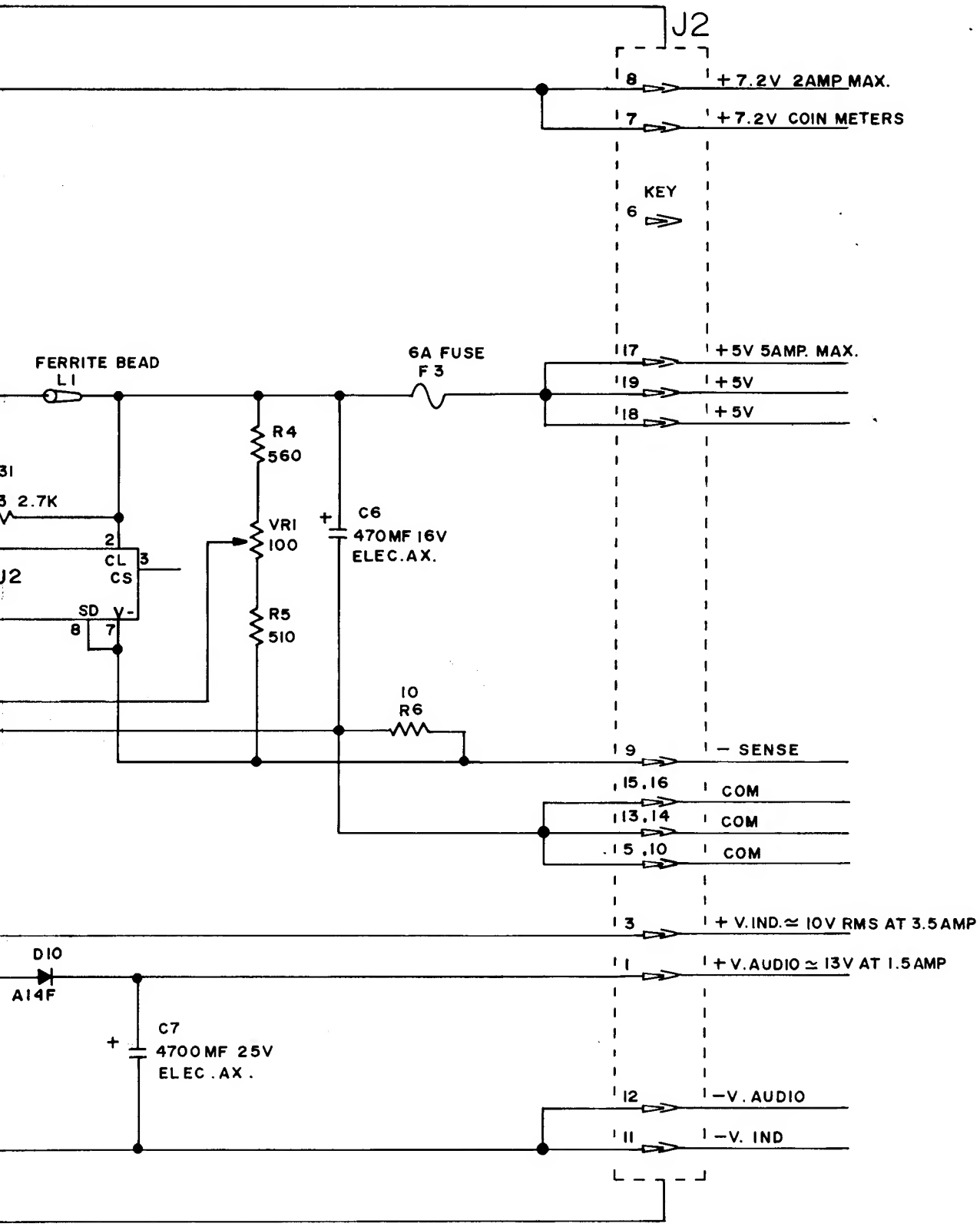


NOTES:

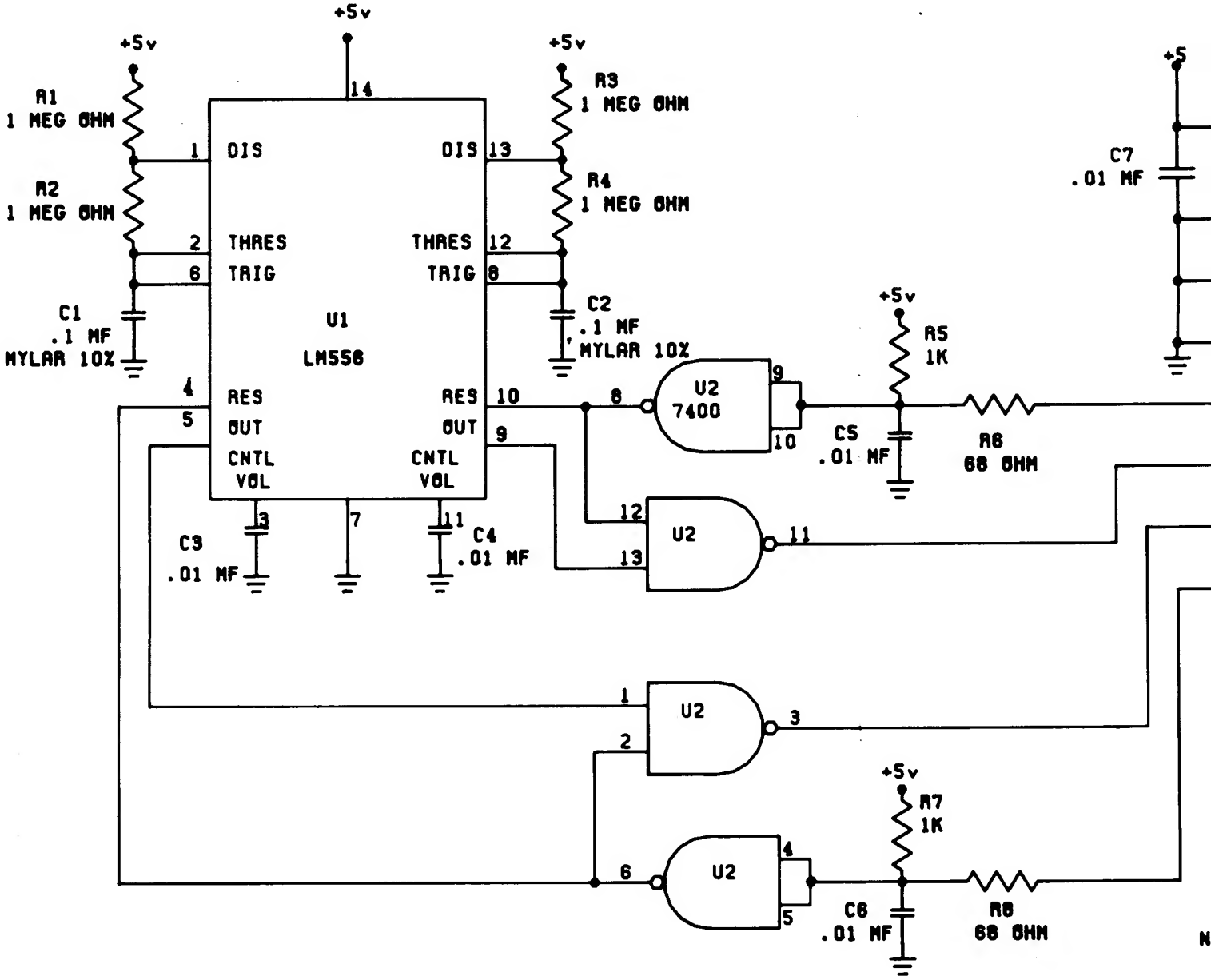
* 2AMP FUSE W/O DISPLAY LITES

** MT87 FOR UR.
MT91 FOR C.T.

DO NOT SCALE D	
DIM TOLERANCES UNLESS SPECIFIED	DRN
CONCENTRICITY T I R .003	CKD
FRACTIONAL 1/64	
DECIMAL .005	
HOLE DIA + .002 .000	DATE

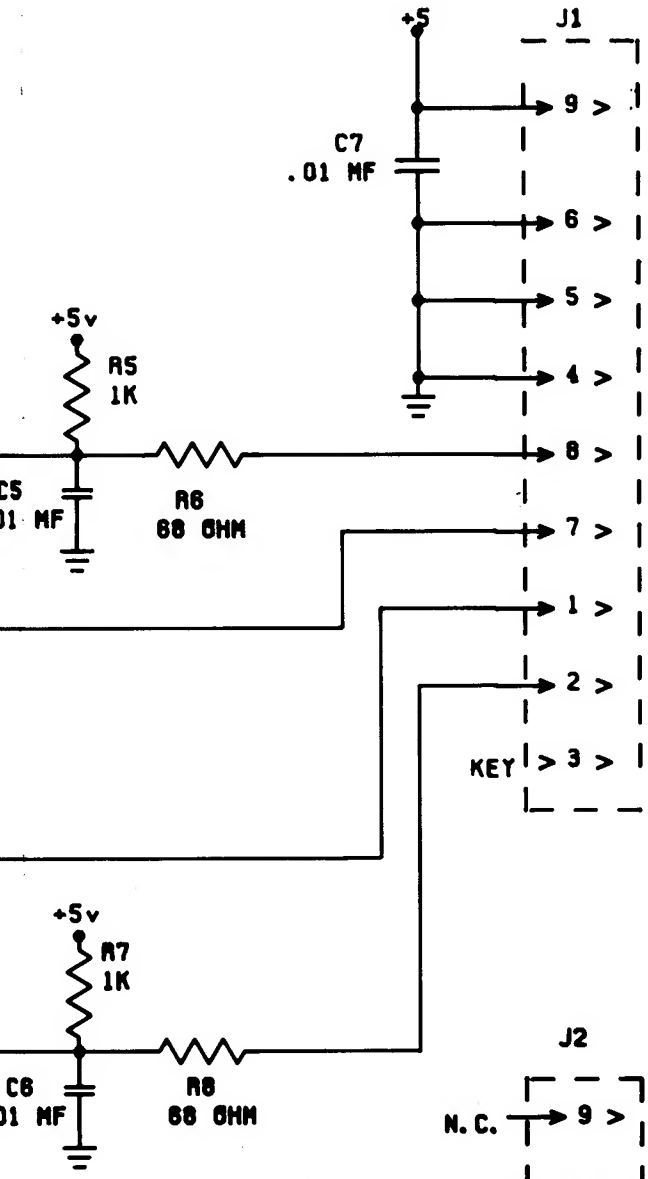


				REVISIONS
DO NOT SCALE DWG	HEAT TREAT	SCALE FULL	USED ON RALLY-X NO. REQ'D 1 PER	**MIDWAY MFG. CO.** FRANKLIN PK ILL
DIM TOLERANCES UNLESS SPECIFIED CONCENTRICITY T I R .003 FRACTIONAL ± 1/64 DECIMAL .005 HOLE DIA + .002 .000	DRN M.M. CKD DATE 2-10-82	MAT'L FINISH	SCHEMATIC POWER SUPPLY A084-90414-C935	ART NO. M051-00935-C025

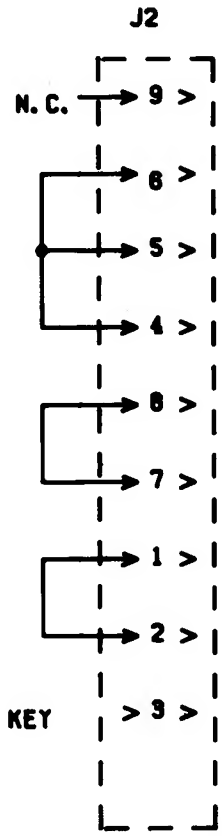


M051-00114-A002

CKD. V.S.	DO NOT SCALE DWG.		REVISIONS
DRN. TJK	DATE 9/30/81	USED ON GALAGA	MIDWAY MFG. CO. FRANKLIN PK, ILL.
heat treat	scale FULL	NO. REQ'D 1 PER	
mat'l.	RAPID FIRE P.C.		PART NO. A082-91410-A000
finish			

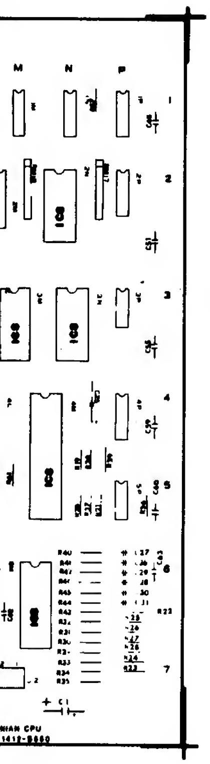


NOTE: USE J1 FOR RAPID FIRE OPTION



NOTE: USE J2 TO BYPASS RAPID FIRE OPTION

REVISIONS	
FG. CO. KLIN PK. ILL.	
2-81410-A000	



CROSS REFERENCE LIST

DESCRIPTION	QUAN	DESIGNATION	PART NO.
100 PF CER.	2	C48,CX2	0550-00800-0900
.001 MF POLY.	2	C30,C31	0550-00800-1100
.0022 MF CER.	1	C45	0550-00800-0800
.01 MF "	17	C2—C17, C19	0550-00800-0700
.01 MF POLY.	4	C26—C29	0550-00800-1000
.1 MF CER.	19	C18,C46—C63	0550-00800-0600
.15 MF TANT.	2	C23,C24	0550-00800-1200
10 MF ELEC.	2	C25,C44	0550-00800-1700
22 MF "	1	C20	0550-00800-1600
100 MF "	1	C22	0550-00800-1500
220 MF "	1	C21	0550-00800-1400
470 MF "	1	C1	0550-00800-1300
100 OHM 1/4w 5% CRBN	1	R5	0062-11083-1XXX
330 " " " "	2	R1,R2	0062-14483-1XXX
470 " " " "	3	R16,R47,R48	0062-15683-1XXX
1 K " " " "	13	R6,R16,R52-R54,R56-R62, RX1	0062-17983-1XXX
2.2K " " " "	2	R17,R39	0062-19583-1XXX
3.3K " " " "	2	R20,R38	0062-20383-1XXX
4.7K " " " "	5	R18,R25,R29,R43,R65	0062-21183-1XXX
10K " " " "	11	R7,R8,R10,R19,R28,R30,R34, R37,R44,R51,R55	0062-22783-1XXX
22K " " " "	6	R11,R23,R27,R31,R41,R45	0062-24383-1XXX
33K " " " "	2	R21,R36	0062-25183-1XXX
47K " " " "	5	R12,R26,R32,R33,R46	0062-25983-1XXX
100K " " " "	2	R15,R24	0062-27583-1XXX
150K " " " "	2	R35,R42	0062-28383-1XXX
220K " " " "	1	R22	0062-29183-1XXX
470K " " " "	1	R40	0062-30783-1XXX
220 OHM 9 PIN	1	RM16	0550-00804-1800
1K " 5 PIN	5	RM1—RM3,RM5,RM9	0550-00804-1300
1K " 9 PIN	3	RM4, RM6, RM7	0550-00804-1500
2.2K " 5 PIN	4	RM10—RM13	0550-00804-1900
2.2K " 9 PIN	4	RM17—RM20	0550-00804-1600
4.7K " 9 PIN	2	RM21, RM22	0550-00804-1700
1K POT	1	VR1	0508-00804-1300
1N914B	1	D1	0550-00801-0100
2N3391A	1	Q1	0550-00802-0200
2N4403	1	Q2	0550-00802-0100
TIP110	1	Q3	0550-00802-0300
06XX CUSTOM IC	1	IC 2L	0068-005CX-XAPX
07XX " "	1	" 4D	0068-006CX-XAPX
08XX " "	3	" 2E,2H,2J	0068-007CX-XAPX
50XX " "	1	" 6L	0068-012CX-XAPX
51XX " "	1	" 4H	0068-008CX-XAPX
54XX " "	1	" 6M	0068-009CX-XAPX
74LS32	2	" 3P,4C	0550-00803-0600
7489	2	" 2A,2B	0550-00803-0300
74107	1	" 6B	0550-00803-7200
74LS107	1	" 1A	0550-00803-0800
74128	1	" 6B	0550-00803-0400
74LS138	2	" 1P, 2P	0550-00803-0700
74S139	1	" 4P	0550-00803-0300
74LS139	2	" 4B,6C	0550-00803-0800
74LS161	2	" 4K, 5K	0550-00803-1000
74LS157	1	" 2C	0550-00803-1100
74LS156	1	" 2D	0550-00803-1200
74LS174	1	" 1C	0550-00803-1300
74LS245	1	" 2M	0550-00803-1400
74LS259	1	" 3C	0550-00803-1500
74LS273	1	" 3B	0550-00803-1600
74LS283	1	" 1B	0550-00803-1700
74LS367	8	" 1E,1F,1H,1J,1K,1L,1M,1N	0550-00803-1800
74LS368	1	" 5A	0550-00803-1900
74LS393	1	" 6A	0550-00803-2000
LM324	1	" 8P	0550-00803-0200
MB8720	1	" 7C	0068-165XX-XX4X
4066 CMOS	1	" 3A	0508-00803-5300

DESCRIPTION	QUAN	DESIGNATION	PART NO.
PROM 8S-1	1	IC 1D	0550-00803-3100
" 8S-2	1	" 5C	0550-00803-3200
EPROM 8S-A	1	" 3N	0550-00803-2300
" 8S-B	1	" 3M	0550-00803-2400
" 8S-C	1	" 3L	0550-00803-2500
" 8S-D	1	" 3K	0550-00803-2600
" 8S-E	1	" 3J	0550-00803-2700
" 8S-F	1	" 3H	0550-00803-2800
" 8S-G	1	" 3E	0550-00803-2900
STATIC RAM 2KX8	1	" 2N	0550-00803-3000
Z-80A	3	" 4E,4J,4M	0550-00803-2200
14 PIN SOCKET	1	ICS 5B	0550-00804-0600
16 " "	3	" 1D,5A,5C	0550-00804-0700
24 " "	8	" 3H,3E,3N,3J,3K,3L,3M,3N	0550-00804-0400
28 " "	7	" 2E,2H,2J,2L,4D,6L,6M	0550-00804-0300
40 " "	3	" 4E,4J,4M	0550-00804-0500
42 " "	1	" 4H	0550-00804-0700
18.432 MHZ CRYSTAL	1	XTAL1	0550-00804-1100
AKC—8 PB SWITCH	1	SW1	0550-00804-1200
8 POS. DIP SWITCH	2	DIPSW1, DIPSW2	0550-00804-1400
CONN. R.A. HEADER. 50PIN	1	J1	0550-00804-0900
CONN. PCB HEADER. 3 PIN	1	J2	0017-00021-0443
MOUNTING HARDWARE			
4-40 HEX NUT	2	MHSCTC	0017-00103-0002
4-40X6 SLT PAN M.S.	2	"	0017-00101-0510
WSH 4 .125-250-032 FLT. ST	2	"	0017-00104-0015
WSH 4 .120-250-018 EXT. ST.	2	"	0017-00104-0071
BOSCONIAN CPU PC.	1		A080-91412-B550

PROJECT ENG: J. SZERSZEN

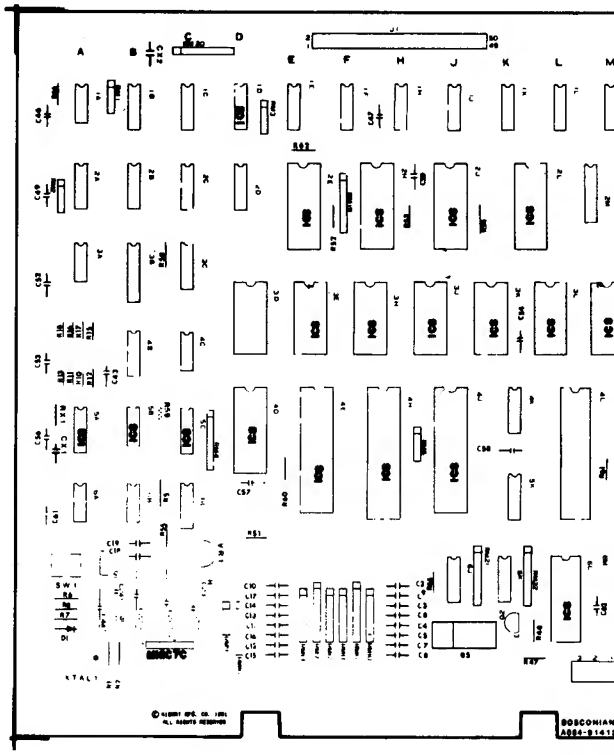
DO NOT SCALE DWG	HEAT TREAT	SCALE FULL	USED ON BOSCONIAN / NO REQ'D 1 PER.	MIDWAY MFG. CO. FRANKLIN PK ILL
DIM TOLERANCES UNLESS SPECIFIED / DRN M.N. / CHK V.S. / DATE 10/08/82	MAT'L / FINISH	BOSCONIAN CPU BD. A084-91412-B550 ASS'Y DRWNG.		PART NO. M051-00550-B010

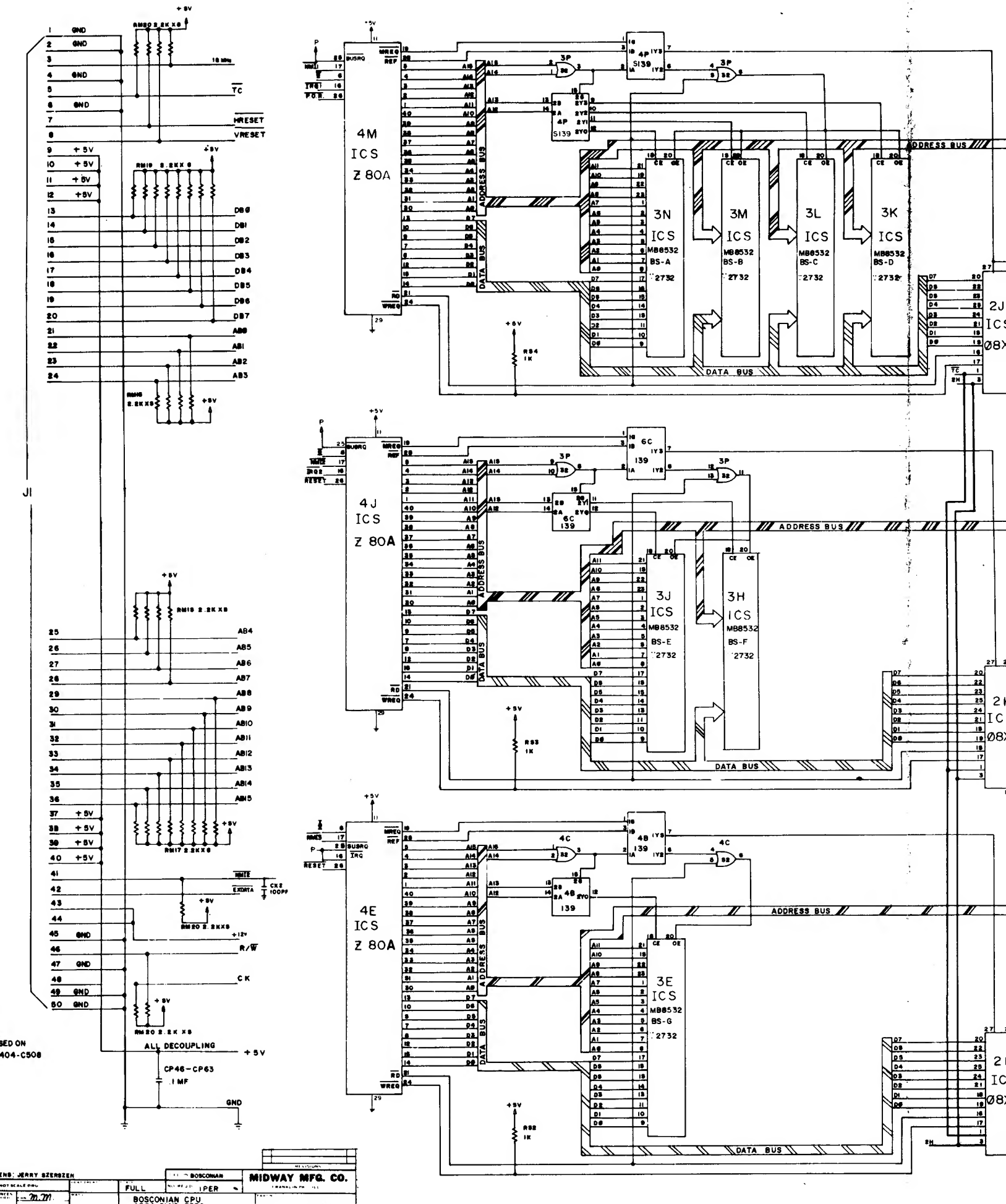
REVISIONS

DESIGNATION LIST

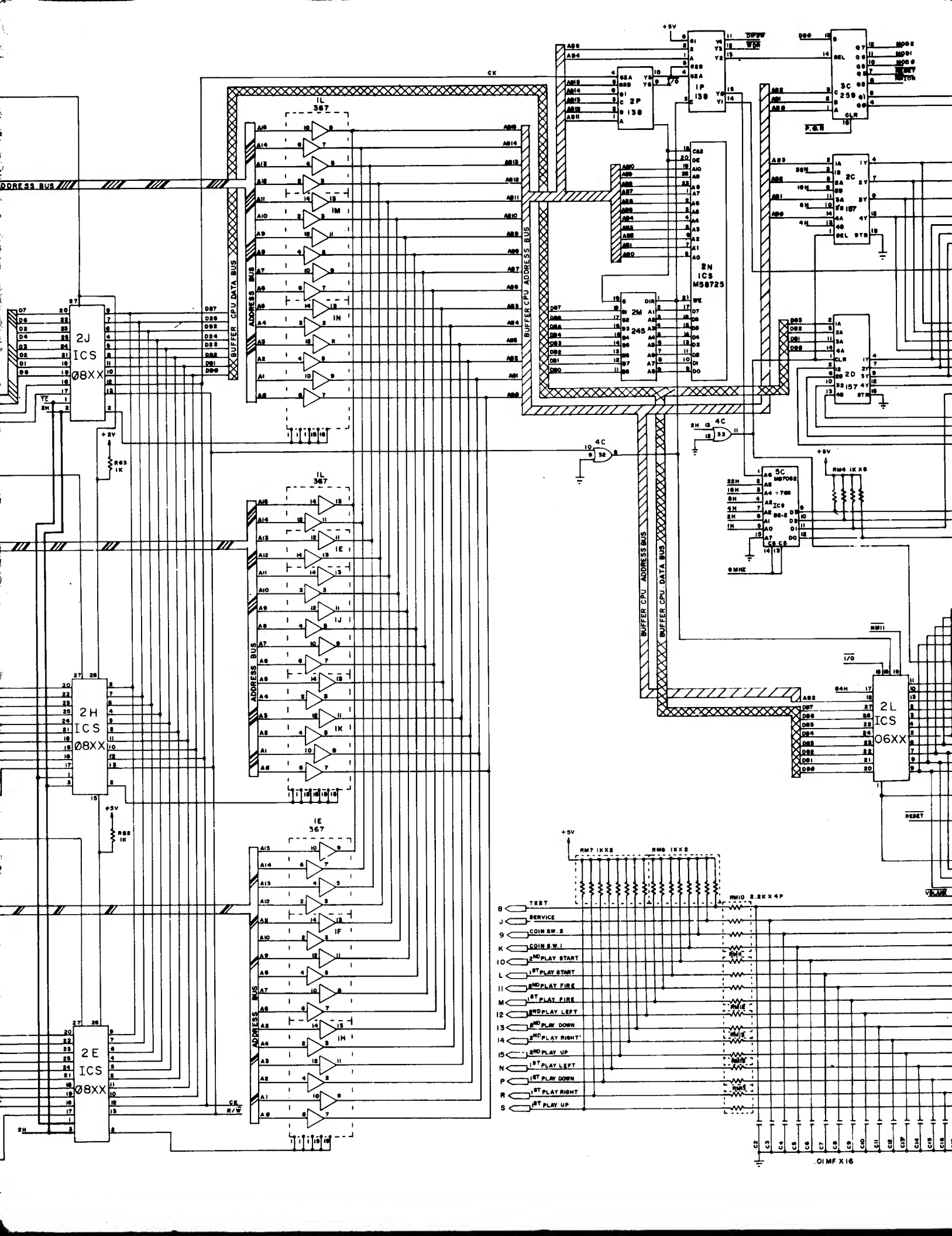
DESIGNATION	DESCRIPTION
C1	470 MF ELEC.
C2—C17	.01 MF CER.
C18	.1 MF "
C19	.01 MF "
C20	22 MF ELEC.
C21	220 MF "
C22	100 MF "
C23,C24	.15 MF TANT.
C25	10 MF ELEC.
C26—C29	.01 MF POLY.
C30,C31	.001 MF "
C32—C42	NOT USED
C43	.0082 MF CER.
C44	10 MF ELEC.
C45	100 PF CER.
C46—C68	.1 MF "
CX1	NOT USED
CX2	100 PF CER.
R1,R2	220 OHM 1/4w 5% CRBN.
R3,R4	NOT USED
R5	100 OHM 1/4w 5% CRBN.
R6	1K " " " "
R7,R8	10K " " " "
R9	NOT USED
R10	10K OHM 1/4w 5% CRBN.
R11	22K " " " "
R12	47K " " " "
R13	100K " " " "
R14	NOT USED
R15	470 OHM 1/4w 5% CRBN.
R16	1K " " " "
R17	2.2K " " " "
R18	4.7K " " " "
R19	10K " " " "
R20	3.3K " " " "
R21	33 K " " " "
R22	220K " " " "
R23	22K " " " "
R24	100K " " " "
R25	4.7K " " " "
R26	10 K " " " "
R27	22K " " " "
R28	47K " " " "
R29	4.7K " " " "
R30	10K " " " "
R31	22K " " " "
R32,R33	47K " " " "
R34	10K " " " "
R35	150K " " " "
R36	33K " " " "
R37	10 K " " " "
R38	3.3K " " " "
R39	2.2K " " " "
R40	470K " " " "
R41	22 K " " " "
R42	150K " " " "
R43	4.7K " " " "
R44	10 K " " " "
R45	22K " " " "
R46	47K " " " "
R47,R48	470 " " " "
R49,R50	NOT USED
R51	10K OHM 1/4w 5% CRBN.
R52—R54	1K " " " "
R55	10K " " " "
R56—R62	1K " " " "
R63,R64	NOT USED
R65	4.7 K OHM 1/4w 5% CRBN.
RX1	1K " " " "
RN1—RN3	1K OHM 3 PIN SIP.
RN4	1K " 9 PIN "
RN5	1K " 3 PIN "
RN6,RN7	1K " 9 PIN "
RN8	NOT USED
RN9	1K OHM 3 PIN SIP.
RN10—RN15	8.2K " 9 PIN "
RN16,RN18	NOT USED
RN19	220 OHM 9 PIN SIP.
RN17—RN20	2.2K " 9 PIN "
RN21,RN22	4.7K " " " "
VR1	1K POT

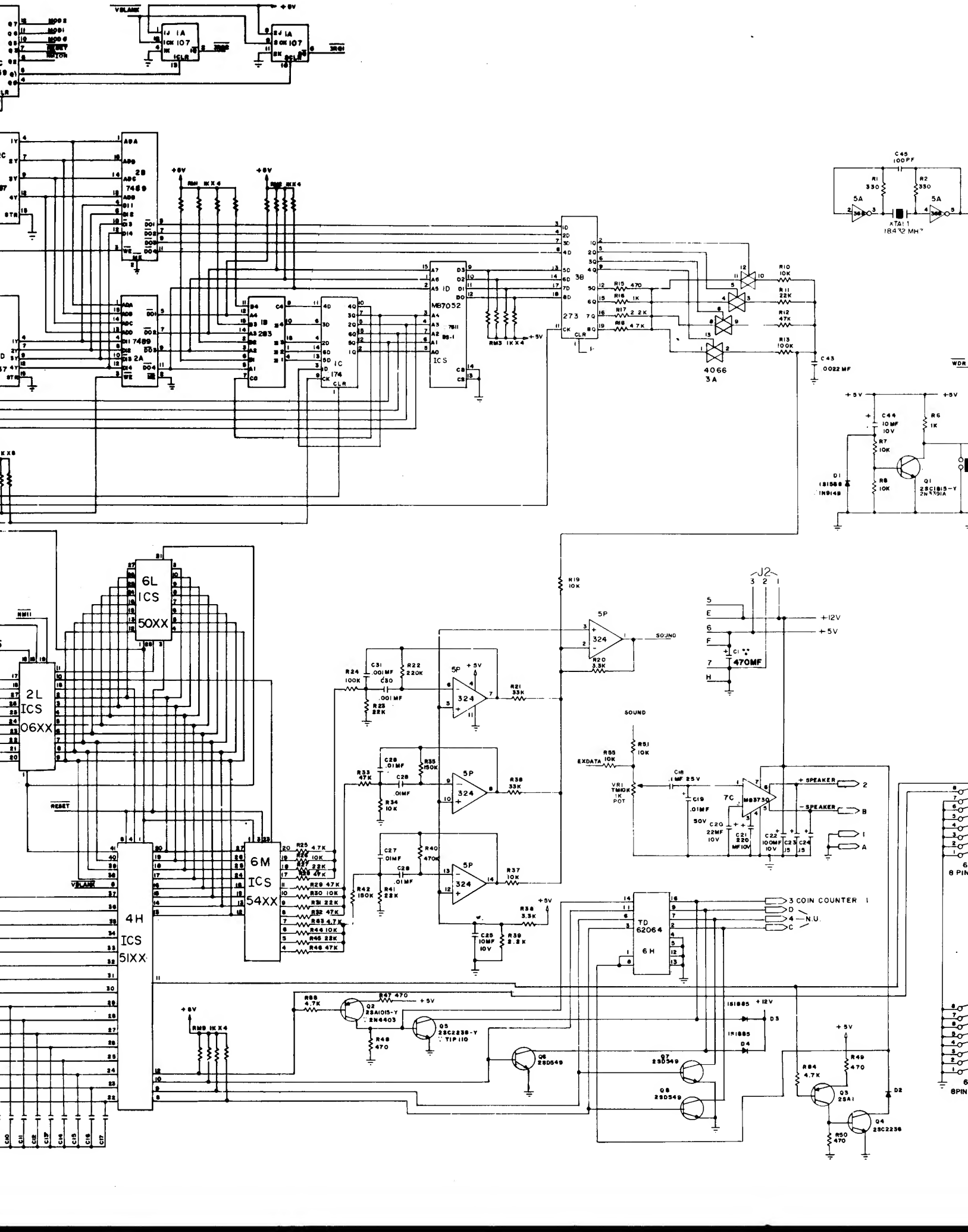
DESIGNATION	DESCRIPTION
D1	IN914B
Q1	2N5391A
Q2	2N4403
Q3,Q4	NOT USED
Q5	TIP 110
IC 1A	74LS107
" 1B	74LS393
" 1C	74LS174
" 1D	PROM 88-1
" 1E,1F,1H,1J,1K,1L,1M,1N	74LS367
" 1P	74LS138
" 2A,2B	7489
" 2C	74LS157
" 2D	74LS86
" 2E,2H,2J	08XX CUSTOM IC
" 2L	08XX " "
" 2M	74LS245
" 2N	STATIC RAM 8K X8
" 2P	74LS86
" 3A	4066 CMOS
" 3B	74LS273
" 3C	74LS299
" 3D	NOT USED
" 3E	EPROM 88-0
" 3H	" 88-F
" 3J	" 88-E
" 3K	" 88-D
" 3L	" 88-C
" 3M	" 88-B
" 3N	" 88-A
" 3P	74LS32
" 4B	74LS139
" 4C	74LS32
" 4D	07XX CUSTOM IC
" 4E	Z-80A
" 4H	81XX CUSTOM IC
" 4J	Z-80A
" 4K	74LS151
" 4L	NOT USED
" 4M	Z-80A
" 4P	74S138
" 5A	74LS368
" 5B	7407
" 5C	PROM 88-2
" 5K	74LS151
" 5P	LM324
" 6A	74LS393
" 6B	74126
" 6C	74LS86
" 6L	80XX CUSTOM IC
" 6M	84XX " "
" 7C	MB3730
ICS 1D	16 PIN SOCKET
" 2E,2H,2J,2L	20 PIN "
" 2M,2E,2H,2J,2K,2L,2M,2N	24 PIN "
" 4D	28 PIN "
" 4E	40 PIN "
" 4H	42 PIN "
" 4J,4M	40 PIN "
" 5A	16 PIN "
" 5B	14 PIN "
" 5C	16 PIN "
" 6L,6M	28 PIN "
XTAL 1	18.432 MHZ CRYSTAL
SW1	ANC-8 PB SWITCH
DIP SW 6J,6K	8 POS. DIP SWITCH
J1	CONN. R.A.HEADER 50 PIN
J2	CONN. RC.S.HEADER 3 PIN
M90C7C	MOUNTING HARDWARE — (2) 4-40 HEX NUT — (2) 4-40 X 5 SLT PAN M.S. — (2) WSH 4 .125-250-032 FLT ST — (2) WSH 4 .150-250-016 EXT. ST
P.C.B.	BOSCONIAN CPU BD.

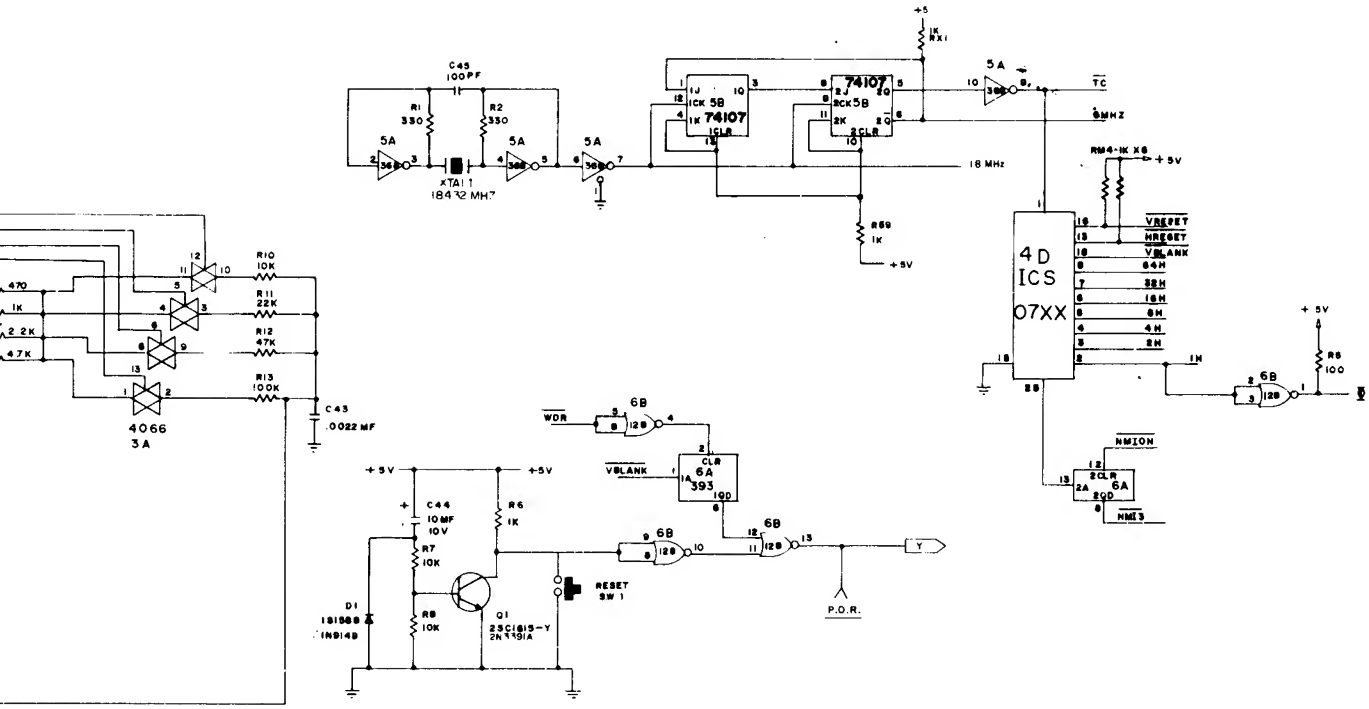


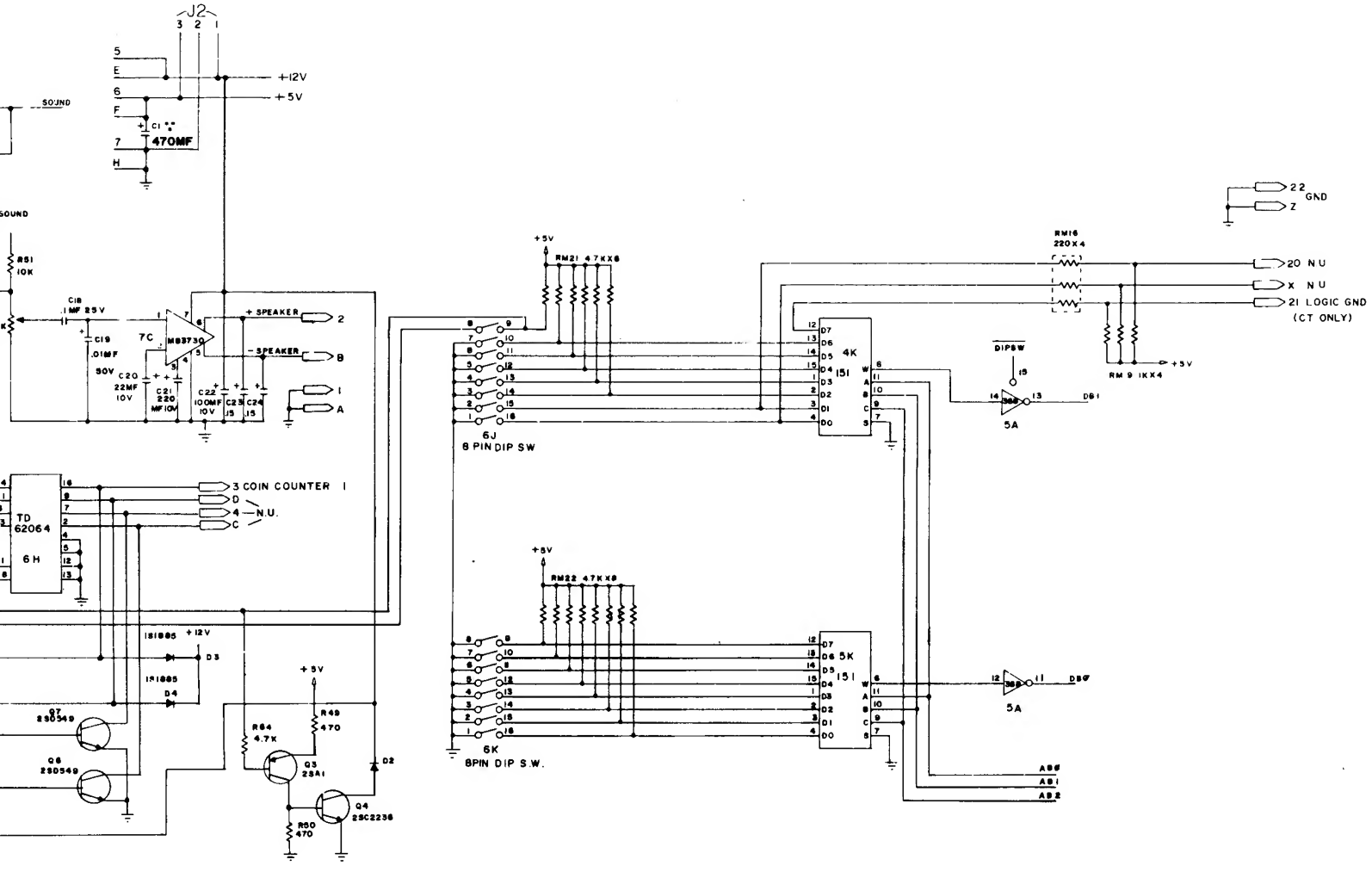


ENG: JERRY SZERSZEN	BOSCONIAN	MIDWAY MFG. CO.
2/9/82	FULL PER	BOSCONIAN CPU A084-9412-B550 SCHEMATIC
		M051 00550 B011


ADDRESS BUS
BUFFER CPU DATA BUS
BUFFER CPU ADDRESS BUS
CK
1L 367
1M
1N
1E
1J
1K
1F
1H
2J ICS 08XX
2H ICS 08XX
2E ICS 08XX
2N ICS M58725
2M 245
2L ICS 06XX
3C 259
1P 138
2P 138
2C 157
2D 157
4C
5C M87C62
RM4 1KX6
RM7 1KX2
RM8 1KX2
RM10 2.2KX4P
.01MF X16
TEST
SERVICE
COIN SW. 2
COIN SW. 1
2ND PLAY START
1ST PLAY START
2ND PLAY FIRE
1ST PLAY FIRE
2ND PLAY LEFT
2ND PLAY DOWN
2ND PLAY RIGHT
2ND PLAY UP
1ST PLAY LEFT
1ST PLAY DOWN
1ST PLAY RIGHT
1ST PLAY UP
RESET
NMI
I/O
6 MHZ


VBLANK
+8V
+5V
+12V
RM1 1K X4
RM2 1K X4
RM3 1K X4
RM8 1K X4
RM9 1K X4
MB7052
ICS
273
174
4066
3A
XTAL1
18.432 MHz
C45 100PF
R1 330
R2 330
5A
C43 .0022 MF
C44 10MF 10V
R6 1K
R7 10K
R8 10K
D1 1S1588 1N914B
Q1 2SC1815-Y 2N4391A
6L ICS 50XX
2L ICS 06XX
4H ICS 51XX
6M ICS 54XX
NMI
RESET
R19 10K
R20 3.3K
R21 33K
R22 220K
R23 22K
R24 100K
C30 .001MF
C31 .001MF
R34 10K
R35 150K
R36 33K
C28 .01MF
C29 .01MF
R37 10K
R40 470K
R41 22K
R42 150K
R38 3.3K
C26 10MF 10V
R39 8.2K
SOUND
R51 10K
R55 10K
EXDATA
VR1 TMOK 1K POT
C18 .1MF 25V
C19 .01MF 50V
C20 22MF 10V
C21 220 MF 10V
C22 100MF 10V
C23 .15
C24 .15
7C MB8730
+ SPEAKER
- SPEAKER
J2
+12V
+5V
470MF
3 COIN COUNTER
N.U.
TD 62064 6H
R47 470
R48 470
R49 470
R50 470
R64 4.7K
Q2 2SA1015-Y 2N4403
Q3 2SC2236-Y TIP110
Q3 2SA1
Q4 2SC2236
Q6 2SD549
Q7 2SD549
Q8 2SD549
D2
D3
D4
1S1885
8 PIN


C45 100PF
R1 330
R2 330
XTAL 1 18432 MHZ
74107
74LS08
18 MHz
8 MHZ
TC
R69 1K
+5V
4D ICS 07XX
VRESET
HRESET
VBLANK
64H
32H
16H
8H
4H
2H
1H
RM4-1K X8
R6 100
6B
WDR
CLR 6A 393
VBLANK
C44 10MF 10V
R7 10K
R6 1K
R8 10K
D1 1S1588 1N9148
Q1 2SC1815-Y 2N5551A
RESET SW 1
P.O.R.
NMION
NMI3
R10 10K
R11 22K
R12 47K
R13 100K
4066 3A
C43 .0022 MF


J2
+12V
+5V
470MF
SOUND
R51 10K
C18 .1MF 25V
C19 .01MF 50V
C20 22MF 10V
C21 220 MF 10V
C22 100MF 10V
C23 .15
C24 .15
7C
M53730
+ SPEAKER
- SPEAKER
2
8
1
A
3 COIN COUNTER 1
D
4 — N.U.
C
TD 62064
6H
RM21 47KX8
6J
8 PIN DIP SW
4K 151
RM16 220X4
20 N.U.
X N.U.
21 LOGIC GND (CT ONLY)
22 GND
Z
RM 9 1KX4
DIPSW
DS1
5A
RM22 47K X8
6K
8PIN DIP S.W.
5K 151
DS7
A56
A81
A82
1S1885
D3
D4
Q7 2SD549
Q6 2SD549
R64 4.7K
R49 470
Q3 2SA1
Q4 2SC2236
D2
R50 470

DESIGNATION LIST

DESIGNATION	DESCRIPTION
C 1	470 MF ELEC.
C 4	.022 MF POLY.
C 5, C6	.0047 MF "
C 7	.001 MF 100V 10% POLY
C8, C9	.001 MF 50V 10% CER.
C10—C45	.1 MF CER.
C46	220 PF MICA
C47	.001 MF 50V 10% CER.
C48	100 PF. CER.
R 1	220 OHM 1/4w 5% CRBN.
R 2	470 " " " "
R 3	220 " " " "
R 4	470 " " " "
R 5	1K " " " "
R 6	220 " " " "
R 7	470 " " " "
R 8	1K " " " "
R11	10K " " " "
R12	22K " " " "
R13	47K " " " "
R14, R15	100K " " " "
R16	22K " " " "
R17	33K " " " "
R18	47K " " " "
R19	1K " " " "
R20	100 " " " "
R21—R31	1K " " " "
R32	330 " " " "
RM1—RM4	2.2 K OHM 9 PIN SIP.
RM5, RM6	1K " " " "
RM7	470 " " " "
RM8—RM10	1K " " " "
RM11	1K " 5 PIN "
Q1, Q2	2N3391A
IC 1B	74LS259
" 1C	74LS138
" 1D	74LS377
" 1E, 1H	PHAN. RAM 2K X 8
" 1J, 1K	74LS374
" 1M	06XX CUSTOM IC
" 1N	50XX " "
" 1R	07XX " "
** " 2B	RAM KIT B OPTION 1
" 2C	74LS163
" 2D	PROM BS-3
" 2E	7489
" 2F, 2H	74LS245
" 2J, 2K, 2L, 2M	74LS283
" 2N	74LS244
" 2P	74LS257
" 2R	PROM BS-4
** " 3A, 3B	RAM KIT B OPTION 2
" 3C, 3D, 3E, 3F	74LS163
" 3H	74LS283
" 3J	74LS20
" 3K	74LS283
" 3L, 3M	74LS86
" 3N	74LS20
" 3P	74LS86
" 3R	74LS138
" 4A	74LS174
" 4B	74LS365
" 4C	74LS273
* " 4D, 4E, 4F, 4H	RAM KIT A OPTION 2
* " 4J	" " " " 1
" 4K	03XX CUSTOM IC
" 4L	74LS377
" 4M	PROM BS-5
" 4N	03XX CUSTOM IC
" 4P	74LS368
" 5A	PHAN. PAL BS-8
" 5B	05XX CUSTOM IC
" 5D	EPROM BS-P
" 5E	" BS-N

DESIGNATION	DESCRIPTION
IC 5F, 5H	74LS174
" 5K	NOT USED
" 5L	EPROM BS-L
" 5M	" BS-K
" 5N	" BS-J
" 5R	52XX CUSTOM IC
" 6B	PROM BS-6
" 6C, 6D	74LS194
" 6E	74LS86
" 6F, 6H	74LS157
" 6J	74LS86
" 6K	74LS175
" 6L	74LS08
" 7C	74LS157
" 7D	74LS174
" 7E	74LS00
" 7F	74LS08
" 7H	PROM BS-7
" 7J	74LS175
ICS 1E	24 PIN SOCKET
" 1H	" " "
" 1M	28 PIN "
" 1N	" " "
" 1R	" " "
" 2D	16 PIN "
" 2R	" " "
" 4K	18 PIN "
" 4M	16 PIN "
" 4N	18 PIN "
" 5A	20 PIN "
" 5B	24 PIN "
" 5D	" " "
" 5E	" " "
" 5L	" " "
" 5M	" " "
" 5N	" " "
" 5R	42 PIN "
" 6B	16 PIN "
" 7H	" " "
PCMH1- PCMH4	DUAL LOCKING SPACERS
J1	50 PIN RT. ANGLE
J2	6 PIN MNL CONN.
CABLE ASSY	AS BELOW
P1, P2	PLUG-SOCKET CONNECTOR 50-PIN
CABLE	RIBBON CABLE-.33FT 50-CONNECTO
	28 GA. STRND. RND. CONDUCTOR
A080-91413-B550	BOSCONIAN P.C.B.

DESCRIPTION

74LS174
NOT USED
EPROM BS-L
" BS-K
" BS-J
52XX CUSTOM IC
PROM BS-6
74LS194
74LS86
74LS157
74LS86
74LS175
74LS08
74LS157
74LS174
74LS00
74LS08
PROM BS-7
74LS175

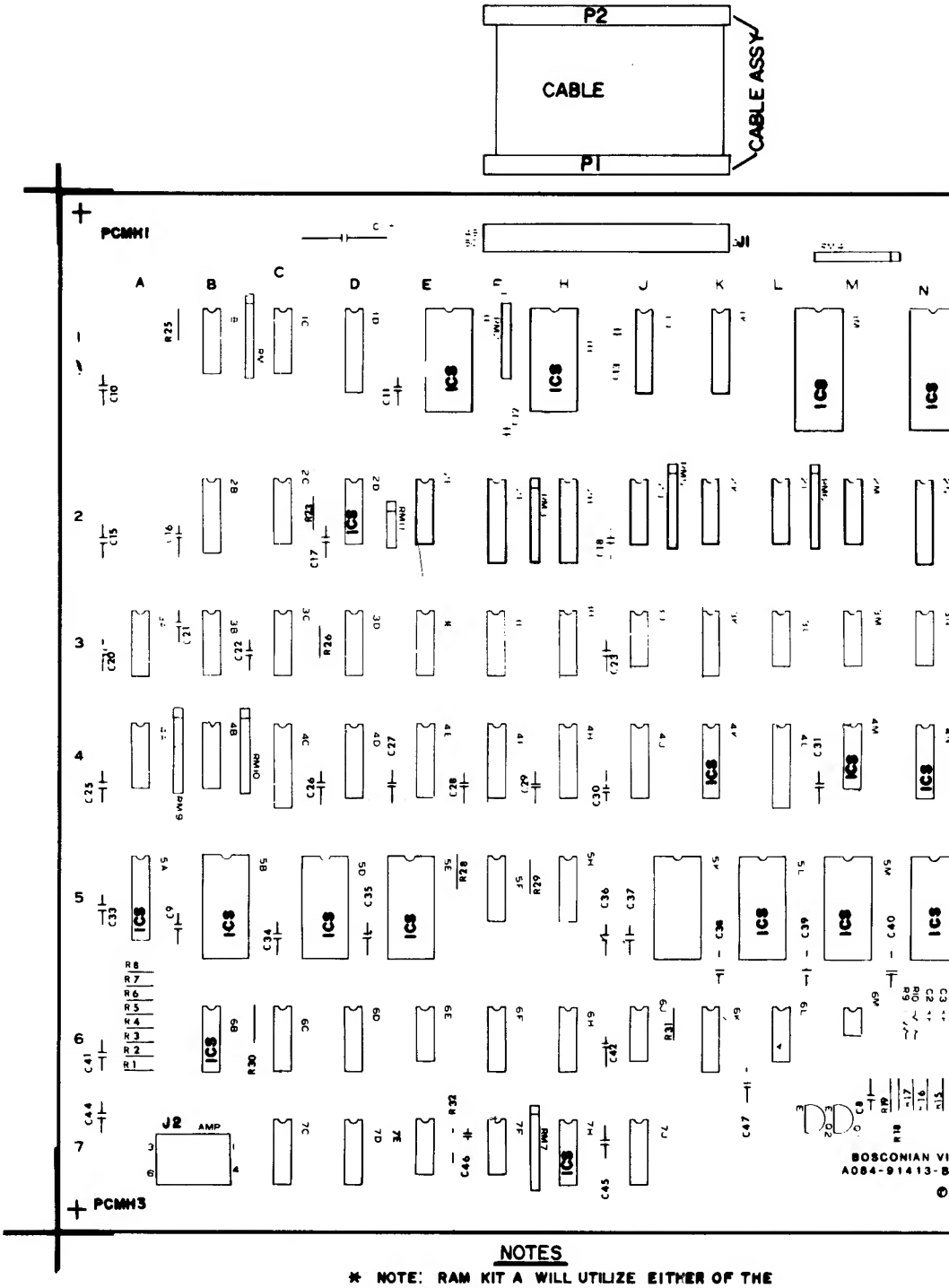
24 PIN SOCKET
" " "
28 PIN "
" " "
" " "
16 PIN "
" " "
18 PIN "
16 PIN "
18 PIN "
20 PIN "
24 PIN "
" " "
" " "
" " "
" " "
" " "
42 PIN "
16 PIN "
" " "

DUALLOCKING SPACERS

50 PIN RT. ANGLE
6 PIN MNL CONN.
AS BELOW

PLUG-SOCKET CONNECTOR 50-PIN
RIBBON CABLE-.33FT 50-CONNECTOR
28 GA. STRND. RND. CONDUCTOR

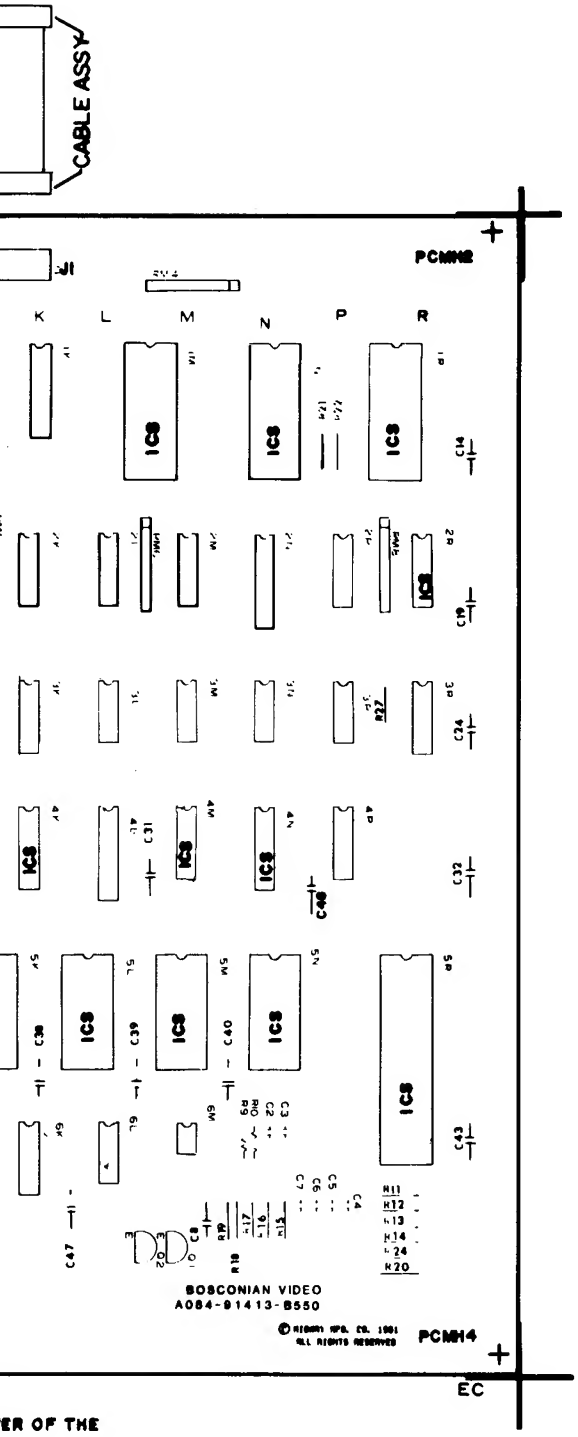
BOSCONIAN P.C.B.



NOTES

* NOTE: RAM KIT A WILL UTILIZE EITHER OF THE FOLLOWING OPTIONS BUT NOT BOTH;
OPTION 1—(1) 2148 LOC. 4J
OR
OPTION2—(4)2147 LOC. 4D,4E,4F,4H

** NOTE: RAM KIT B WILL UTILIZE EITHER OF THE FOLLOWING OPTIONS BUT NOT BOTH;
OPTION1—(1) 2148 LOC. 2B
OR
OPTION2—(2) HM2511 LOC. 3A,3B



ER OF THE

ER OF THE

DESCRIPTION	QUAN.	DESIGNATION
100 PF CER	1	C48
220 PF MICA.	1	C46
.001 MF 100V 10% POLY.	1	C7
.001 MF 50V 10% CER.	3	C8,C9,C47
.0047 MF POLY.	2	C5,C6
.022 MF "	1	C4
.1 MF CER.	36	C10—C45
470 MF ELEC.	1	C1
100 OHM 1/4w 5% CRBN	1	R20
220 " " " "	3	R1,R3,R6
330 " " " "	1	R32
470 " " " "	3	R2,R4,R7
1K " " " "	14	R5,R8,R19,R21—R31
10K " " " "	1	R11
22K " " " "	2	R12,R16
33K " " " "	1	R17
47K " " " "	2	R13,R18
100K " " " "	2	R14,R15
470 OHM 9 PIN SIP.	1	RM7
1K " " " "	5	RM5,RM6,RM8—RM10
1K " 5PIN "	1	RM11
2.2K " 9PIN "	4	RM1—RM4
2N3391A	2	Q1,Q2
03XX CUSTOM IC	2	IC 4K,4N
05XX " "	1	" 5B
06XX " "	1	" 1M
07XX " "	1	" 1R
50XX " "	1	" 1N
52XX " "	1	" 5R
74LS00	1	IC 7E
74LS08	2	" 6L,7F
74LS20	2	" 3J,3N
74LS86	5	" 3L,3M,3P,6E,6J
7489	1	" 2E
74LS138	2	" 1C,3R
74LS157	3	" 6F,6H,7C
74LS163	5	" 2C,3C,3D,3E,3F
74LS174	4	" 4A,5F,5H,7D
74LS175	2	" 6K,7J
.4LS194	2	" 6C,6D
74LS244	1	" 2N
74LS245	2	" 2F,2H
74LS257	1	" 2P
74LS259	1	" 1B
74LS273	1	" 4C
74LS283	6	" 2J,2K,2L,2M,3H,3K
74LS365	1	" 4B
74LS368	1	" 4P
74LS374	2	" 1J,1K
74LS377	2	" 1D,4L
PROM BS-3	1	IC 2D
" BS-4	1	" 2R
" BS-5	1	" 4M
" BS-6	1	" 6B
" BS-7	1	" 7H
PHAN. PAL BS-8	1	" 5A
EPROM BS-J	1	" 5N
" BS-K	1	" 5M
" BS-L	1	" 5L
" BS-N	1	" 5E
" BS-P	1	" 5D
PHAN RAM 2k X8	2	" 1E,1H

CROSS REFERENCE LIST

TION	PART NO.
	0550-00800-0900
	0550-00800-2000
	0550-00800-2100
47	0550-00800-2400
	0550-00800-2200
	0550-00800-2300
5	0550-00800-2500
	0508-00800-1500
	0062-11083-1XXX
8	0062-13383-1XXX
	0062-14483-1XXX
7	0062-15683-1XXX
19,R21—R31	0062-17983-1XXX
	0062-22783-1XXX
	0062-24383-1XXX
	0062-25183-1XXX
	0062-25983-1XXX
	0062-27583-1XXX
	0550-00804-2400
3,RM8—RM10	0550-00804-2100
	0550-00804-2000
14	0550-00804-2200
	0550-00802-0400
	0066-010CX-XAPX
	0066-004CX-XAPX
	0066-005CX-XAPX
	0066-006CX-XAPX
	0066-012CX-XAPX
	0066-013CX-XAPX
	0550-00803-3400
	0550-00803-3500
	0550-00803-3600
3P,6E,6J	0550-00803-3700
	0550-00803-3300
	0550-00803-3800
C	0550-00803-3900
3D,3E,3F	0550-00803-7100
H,7D	0550-00803-4000
	0550-00803-7000
	0550-00803-6900
	0550-00803-6800
	0550-00803-4100
	0550-00803-4200
	0550-00803-4300
	0550-00803-4400
L,2M,3H,3K	0550-00803-4500
	0550-00803-4600
	0550-00803-4700
	0550-00803-6700
	0550-00803-4800
	0550-00803-5500
	0550-00803-5600
	0550-00803-5700
	0550-00803-5800
	0550-00803-5900
	0550-00803-6600
	0550-00803-4900
	0550-00803-5000
	0550-00803-5100
	0550-00803-5200
	0550-00803-5300
	0550-00803-5400

DESCRIPTION	QUAN.	DESIGNATION	PART NO.
PHAN.RAM A OPTIONS	1	———	0550-00803-6000
* RAM KIT A OPTIONS 1	1	IC 4J	0550-00803-6200
* " " " " 2	4	" 4D,4E,4F,4H	0550-00803-6300
PHAN.RAM B OPTIONS	1	———	0550-00803-6100
** RAM KIT B OPTIONS 1	1	IC 2B	0550-00803-6400
** " " " " 2	2	" 3A,3B	0550-00803-6500
16 PIN SOCKET	5	ICS-2D,2R,4M,6B,7H	0508-00804-0700
18 PIN "	2	" 4K,4N	0508-00804-0600
20PIN "	1	" 5A	0550-00804-2300
24PIN "	8	" 1E,1H,5B,5D,5E,5L " 5M,5N	0508-00804-0500
28 PIN "	3	" 1M,1N,1R	0508-00804-0400
42 PIN "	1	" 5R	0508-00804-1900
6 PIN MNL CONN.	1	J2	0017-00021-0424
50 PIN RT. ANGLE CONN.	1	J1	0508-00804-0800
DUAL LOCKING SPACERS	4	PCMH1—PCMH4	0017-00042-0253
CABLE ASSY.	1	———	0508-00804-2200
50-PIN PLUG-SOCKET CONNECTOR	2	P1,P2	0508-00804-0900
RIBBON CABLE-.33FT	1	CABLE	0017-00033-0348
50-CONDUCTOR 28 GA. STRND AND CONDUCTOR			
BOSCONIAN P.C.B	1	———	A080-91413-B550

REVISION

PROJECT ENG. J. SEZERSZEN

USED ON BOSCONIAN

MIDWAY MF

FRANKLIN PK IL

DO NOT SCALE DWG

HEAT TREAT

SCALE FULL

NO REQ'D 1 PER

DIM TOLERANCES UNLESS SPECIFIED

MAT'L

FINISH

DRN M.M

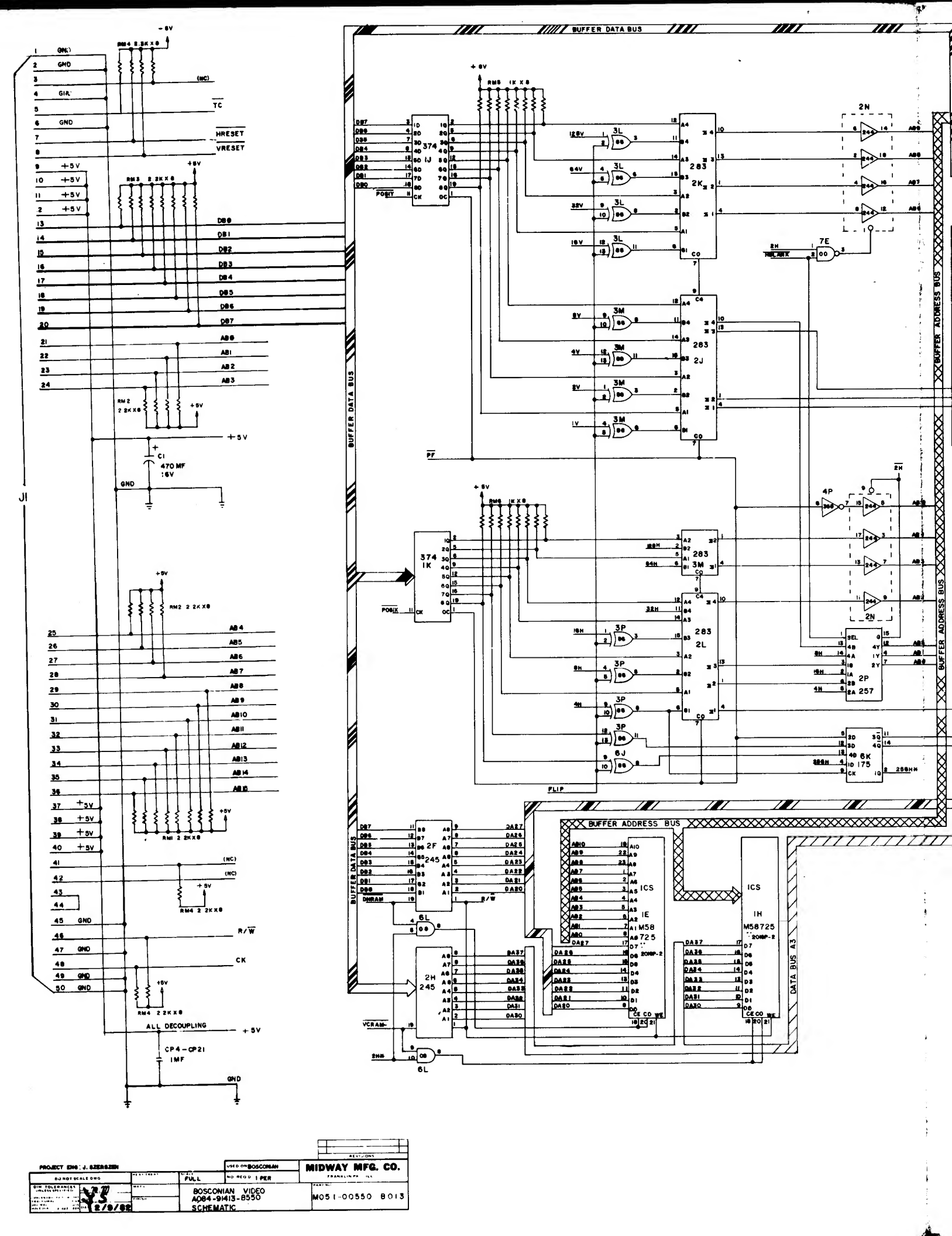
CHK Y.S.

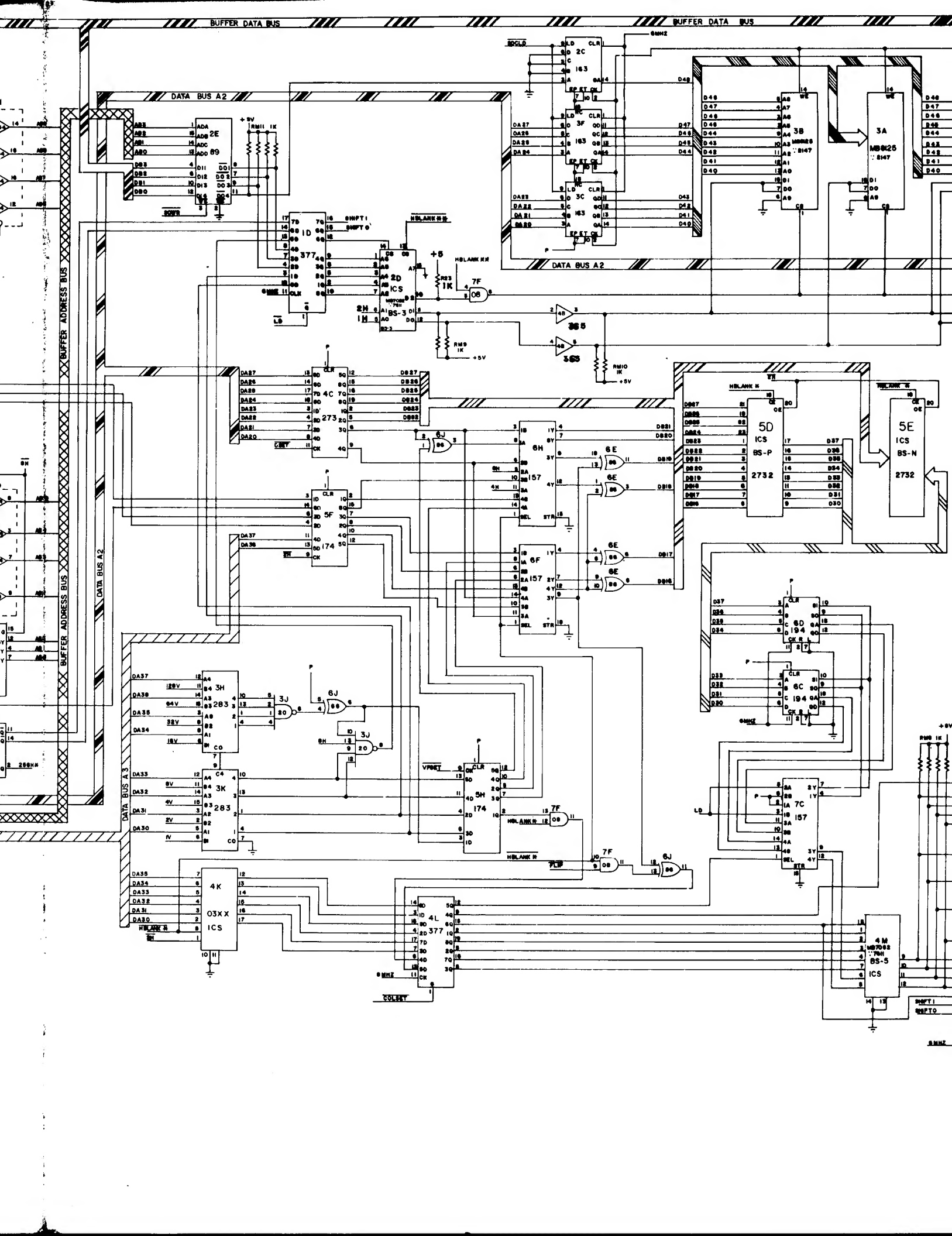
DATE 12/9/82

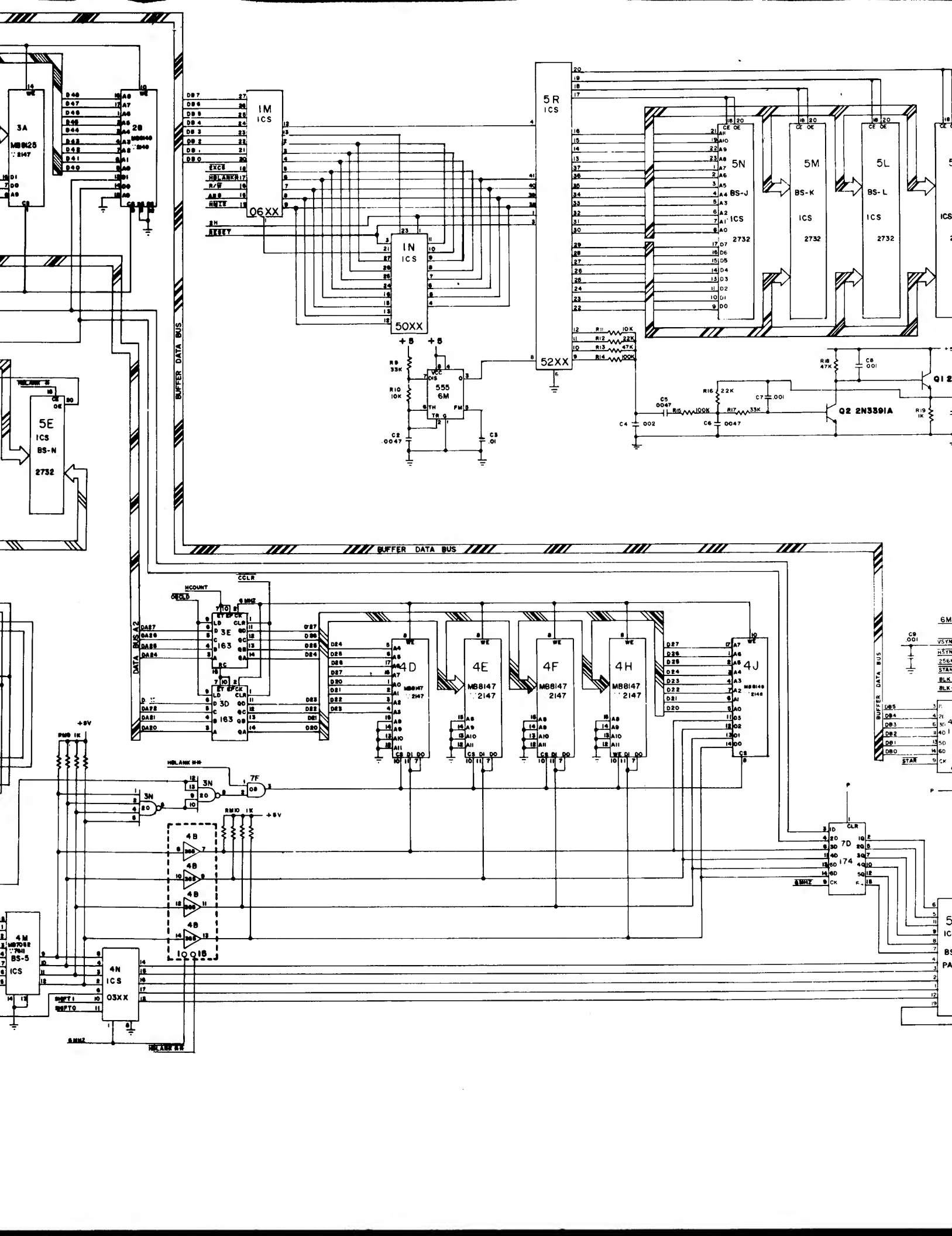
BOSCONIAN VIDEO
A084-91413-B550
ASS'Y DRWNG.

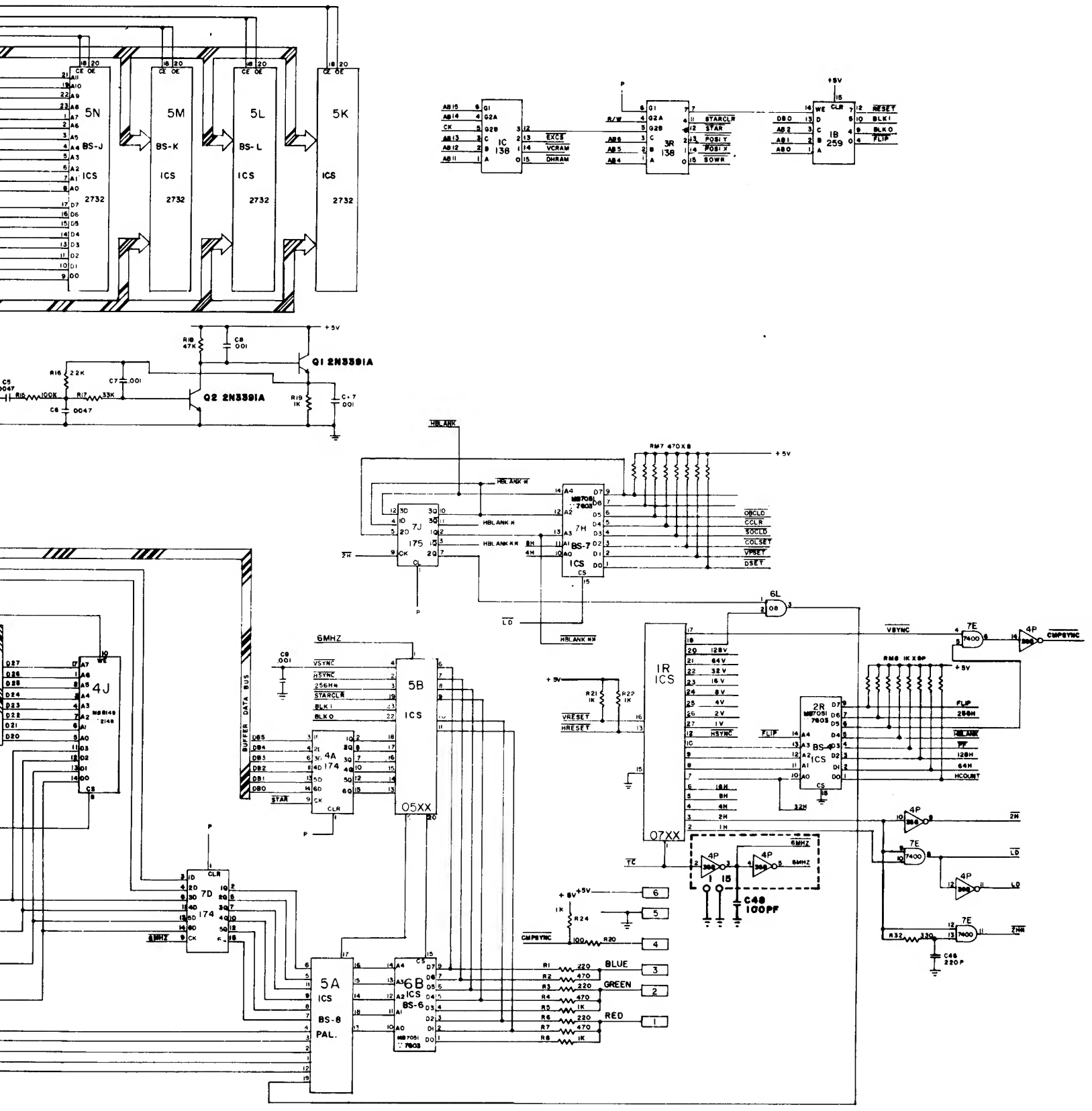
PART NO.

M05 1-0055

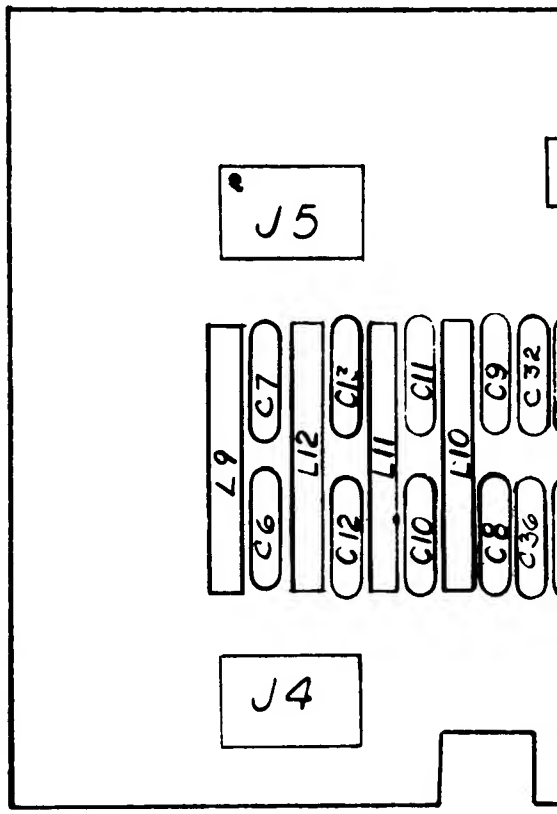

BUFFER DATA BUS
BUFFER ADDRESS BUS
+5V
GND
RM4 8.2K X 8
RM3 2.2K X 8
RM2 2.2K X 8
RM1 2.2K X 8
C1 470 MF 16V
ALL DECOUPLING
CP4 - CP21 1MF
374 IJ
374 1K
283 2K
283 2J
283 3M
283 2L
2P 257
6K 175
2F 245
2H 245
ICS IE M58725
ICS IH M58725
PF
FLIP
R/W
CK
VCRAM
DATA BUS A3
PROJECT ENG: J. SZERSZEN
DO NOT SCALE DWG
USED ON BOSCONIAN
NO REQ'D 1 PER
MIDWAY MFG. CO.
FRANKLIN PK. ILL.
SCALE FULL
BOSCONIAN VIDEO
A084-91413-8550
SCHEMATIC
M051-00550 B013
2/9/82


BUFFER DATA BUS
BUFFER DATA BUS
DATA BUS A2
DATA BUS A2
BUFFER ADDRESS BUS
BUFFER ADDRESS BUS
DATA BUS A2
DATA BUS A3
2E 89
1D 377
2D ICS BS-3
2C 163
3F 163
3C 163
3B MB8126 8147
3A MB8126 8147
4C 273
5F 174
6H 157
6F 157
5D ICS BS-P 2732
5E ICS BS-N 2732
6D 194
6C 194
7C 157
3H 283
3K 283
4K 03XX ICS
5H 174
4L 377
4M MB7052 PROM BS-5 ICS
HBLANK H
HBLANK R
VRESET
LD
FLIP
SHIFT 1
SHIFT 0
COLENT
9MHZ
+5V


BUFFER DATA BUS
3A
MB826
2147
2B
1M
ICS
Q6XX
1N
ICS
50XX
5R
ICS
52XX
5N
BS-J
ICS
2732
5M
BS-K
ICS
2732
5L
BS-L
ICS
2732
5E
ICS
BS-N
2732
555
6M
Q2 2N3391A
4D
4E
4F
4H
4J
MB8147
2147
3D
3E
163
7D
174
4B
1005
4M
BS-5
ICS
4N
ICS
03XX
7F
08
3N
20
HCOUNT
CCLR
HBLANK
+5V

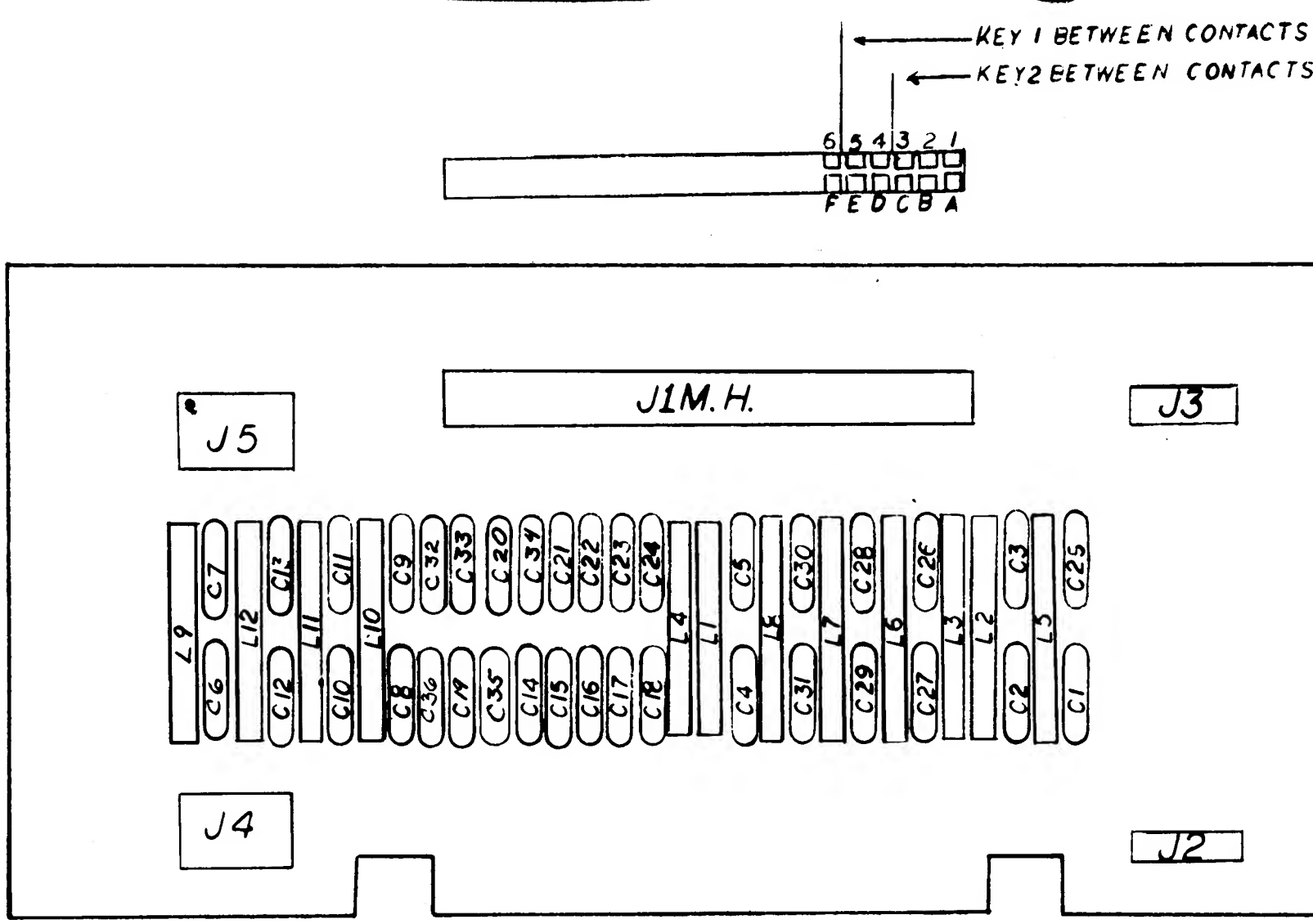

5N
5M
5L
5K
BS-J
BS-K
BS-L
ICS
2732
1C 138
3R 138
1B 259
Q1 2N3391A
Q2 2N3391A
HBLANK
6MHZ
VSYNC
HSYNC
256H
STARCLR
BLK I
BLK O
BUFFER DATA BUS
5B ICS 05XX
4A 174
7J 175
7H
BS-7 ICS
7D 174
4J
5A ICS BS-8 PAL.
6B ICS BS-6
1R ICS 07XX
2R ICS BS-4
6L
7E 7400
4P
RM8 1K X 8P
RM7 470X8
C48 100PF
BLUE
GREEN
RED
CMPSYNC
VBYNC
FLIP
HCOUNT
RESET
BLK I
BLK O
FLIP

DESIGNATION	DESCRIPTION
C1	.1MF AX CER
C2-C5	47 PF AX CER
C6, C7	470PF AX CER
C8-C13	100 PF AX CER
C14-C36	.01 MF AX CER
L1-L4	CHOKE 10 JUH W.W. MILLER
L5-L8	CHOKE 10 JUH W.W.
L9-L12	CHOKE ENCAP 10 JUH
J1	P.C. EDGE CONN
J2, J3	3 PIN HEADER
J4, J5	6 PIN HEADER
J1 M.H.	2 EDGE CONN. KEY (2) 6-32 x 10 SLOT PAN SCREW (2) WSH 6 145-.250-.032 (1) BRKT.-CONN. FIN.



DESCRIPTION	QUANTITY	DESIGNATION	PHANTOM NUMBER
47 PF 50V AX CER	4	C2-C5	0550-00800-0500
100PF 50V AX CER	6	C8-C13.	0550-00800-0100
470PF 50V AX CER	2	C6, C7	0550-00800-0200
.01MF 50V AX CER	23	C14-C36	0550-00800-0300
.1MF 50V AX CER	1	C1	0550-00800-0400
10 JUH W.W. RF CHOKE MILLER	4	L1-L4	0067-021XX-XXAX
10 JUH W.W. RF CHOKE	4	L5-L8	0550-00804-0100
10 JUH ENCAP RF CHOKE	4	L9-L12	0550-00804-0200
PC EDGE CONN	1	J1	C017-00021-0418

PLEASE DESTROY ALL PRINTS DATED PRIOR TO 1-4-82



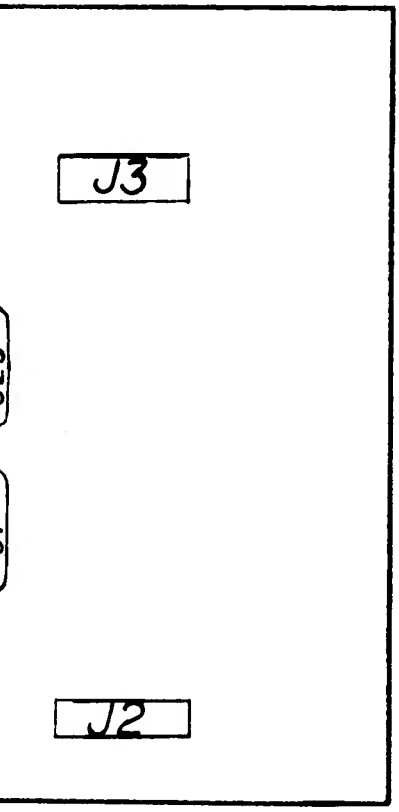
IBER	DESCRIPTION	QU
-0500	3 PIN HEADER AMP 350429-1	
-0100		
0200	6 PIN HEADER AMP 350431-1	
0300		
-0400	PC EDGECON KEY	
XXAX	6-32 x 10 SLOT PAN SCREW	
-0100	WSH 6 145-.250-.032	
0200	BRKT-CONN. FIN	
0418		

DATED

PROJECT ENGINEER L. EKKER

DIM. TOLERANCES UNLESS OTHERWISE SPEC.	FIRST USED ON	
CONCENTRICITY T.I.R. 002	DRN CKS	DATE 1-4-82
FRACTIONAL . . . . . ± .1/64	MECH CHK	MAT'L
DECIMAL . . . . . ± .005		
HOLE DIA. . . . . +.002 —.000	ELEC CHK	FINISH
ANGLE . . . . . ± 1/2°		
DO NOT SCALE DWG		

ETWEEN CONTACTS 5,E AND6,F
ETWEEN CONTACTS 3,C AND 4,D



SCRIPTION	QUANTITY	DESIGNATION	PHANTON NUMBER
PIN HEADER MP 350429-1	2	J2-J3	0017-00021-0443
PIN HEADER MP 350431-1	2	J4-J5	0017-0021-0424
EDGECON KEY	2	JIMH	C017-00021-0396
32x10 SLOT N SCREW	2	JIMH	0017-00101-0574
SH 6 5-,250-.032	2	JIMH	0017-00104-0002
RKT- NN.FIN	1	JIMH	0866-0016-00XF

KER

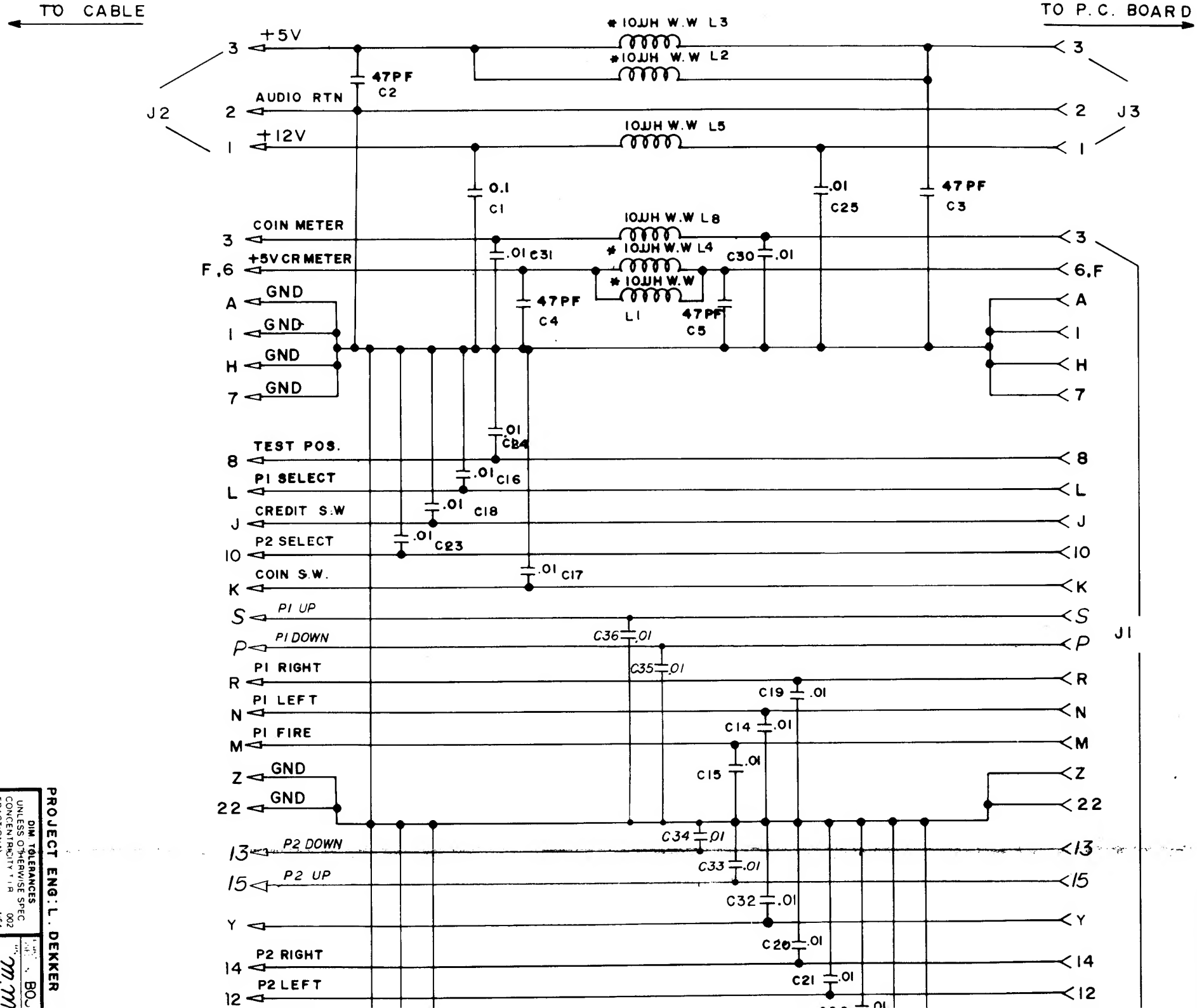
KS	DATE 1-4-82	SCALE FULL
K	MAT'L	
K	FINISH	

MIDWAY MFG. CO.
FRANKLIN PK., IL. 60131 A BALLY CO.

BOSCONIAN FILTER P.C.
ASSY. DRWNG.
A084-9141 4-A550

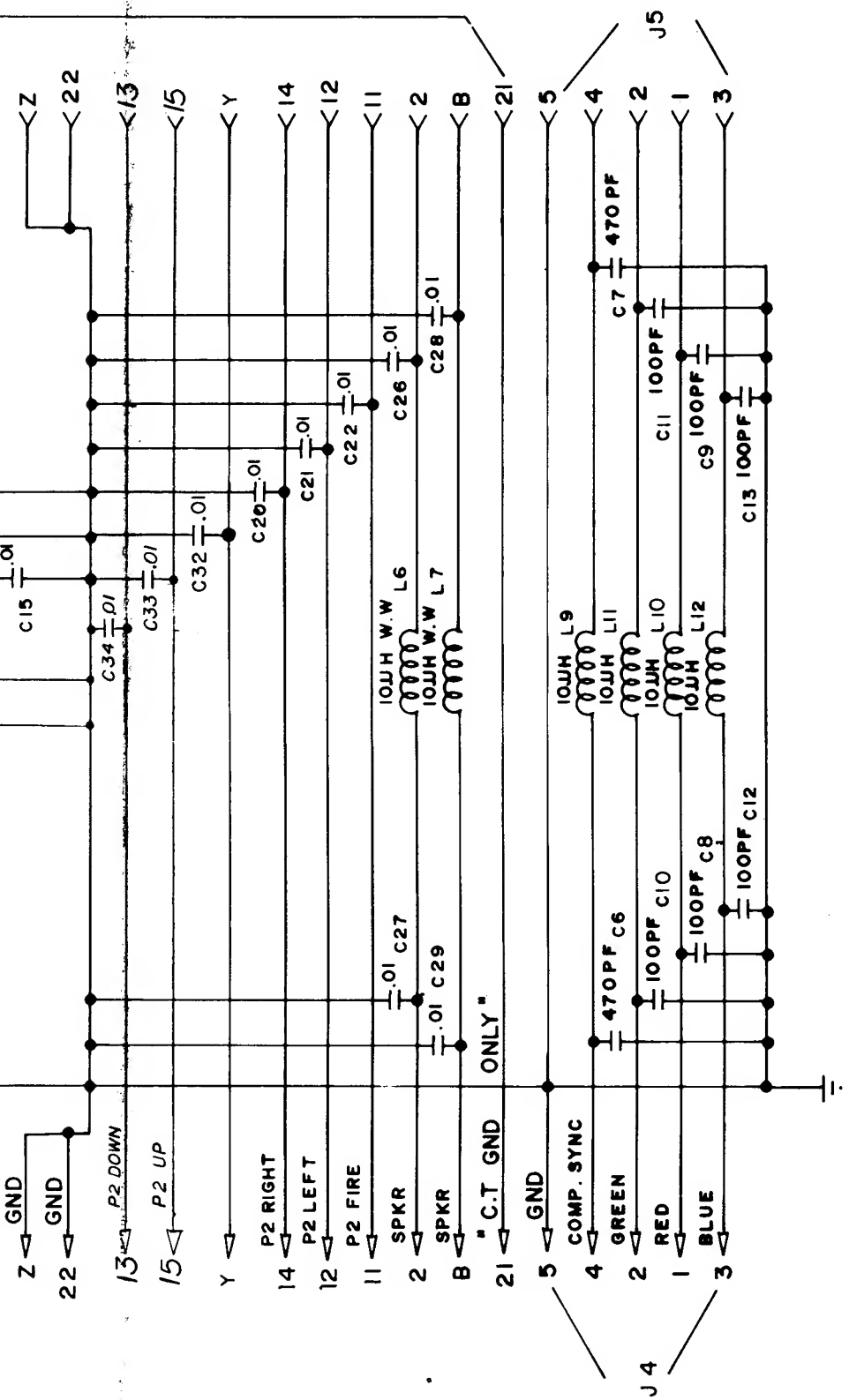
REVISIONS

PART NO.
M-0-5-1 -0-0-5-5-0-A-0-1-4



PROJECT ENG: L. DEKKER

DIM TOLERANCES
UNLESS OTHERWISE SPEC
CONCENTRICITY T.I.R .002
FRACTIONAL ± 1/64
DECIMAL .002 ± .005
HOLE DIA .000
ANGLE ± 1/2°
DO NOT SCALE DWG



NOTE:

ALL .1+.01 ARE MF
ALL CAPS AX. CER. UNLESS NOTED OTHERWISE

* 1.5 AMP (MILLER TYPE) INDUCTORS

PROJECT ENG: L. DEKKER

DIM. TOLERANCES UNLESS OTHERWISE SPEC			
CONCENTRICITY T I R	.002		
FRACTIONAL	± 1/64		
DECIMAL	± .005		
HOLE DIA	+ .002 - .000		
ANGLE	± 1/2°		
DO NOT SCALE DWG			

DRN BOSCONIAN | MM | 12-22-83 | FULL

MIDWAY MFG. CO.
FRANKLIN PK., IL 60131 A BALLY CO

BOSCONIAN
FILTER BOARD
A084-91[illegible]55

REVISIONS

PART NO
M051-00550-A015